D16

D•16 DIALLER SECURITY ALARM PANEL

v4.6

CONTROL PANEL AND DIALLER

16

MADE IN AUSTRALIA

INSTALLATION & PROGRAMMING MANUAL

A$15.00
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Ness D16 control panel – Installation and programming manual

Revision
4.6

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Australian Communications Authority
TELECOMMUNICATIONS COMPLIANCE

D16 V4.6
INSTALLER MANUAL
Revision 4.6
March 2003

Document Part Number: 890-248
For product: 100-687 D16 Control Panel

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D16installer rev4.6 pmo170303

Specifications may change without notice.

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D16 FEATURES

- 8 or 16 Fully programmable zones
- Any combination of 8 or 16 hardwire or radio zones
- Full radio supervision
- Contact ID Dialler Format
- Ultra-Modern and Impact resistant Housing
- Ness Audible Dialler Format
- "Follow Me" Audible Dialler Option
- Separate 24 Hour Tamper input
- Single or Double Trigger Zones
- Remote LCD Keypads (Max 3)
- Fully programmable via the system Keypad - Eliminates the need for expensive programmers or Proms.
- Inbuilt Vibration Sensor Analyser
- All programming data is permanently stored in a non-volatile EEprom memory
- Windows based Up\Down load Software allows remote programming and event status
- True Dynamic Battery Test every time the Panel is armed / disarmed and every hour
- Area Partitionable (2 Areas). Any Zone can be programmed to any area, as well as common areas
- Comes complete with an AC plug pack and supports a 12V 7Ah battery to maintain systems security under all power supply conditions
- Monitor Mode (Home Mode)
- Outputs are separately fused with Automatic Reset Fuses
- Day Zone feature.
- Temporary Day Zone feature.
- Zone inputs can be split with two end-of-line resistors so that two detection devices (ie reed switches) can both be monitored to provide maximum security
- 30 Event Memory
- Supports 16 Radio Devices (Radio PIRs, Radio Reeds etc)
- Supports 14 Radio Keys
- All inputs and outputs are heavily protected against lightning and high voltage supply transients. An earth terminal is provided for extra protection
- 15 User Codes
- 'Arm only' codes can be programmed
- Programmable Inputs to activate selectable Outputs
- Designed utilising the latest SMD Technology
- Simple to Program and Use.

INTRODUCTION

The NESS D16 is a wholly Australian Designed and Manufactured product from Ness Security Products Pty Ltd, Australia's largest manufacturer of quality electronic security products. Ness Security Products Pty Ltd is a Quality Accredited Company to ISO 9001.

The Ness D16 alarm control panel has been designed to provide you, the security professional, with a 16 zone hardwired and wireless control panel featuring ease of installation, ease of programming and user friendly operation in a package which is functional and attractive. The design and build of this product is based on the Ness philosophy of excellence without compromise.

Version History

V4.6

- New Feature - Temporary Day Zones.
- Enable or Disable Day Zones from operating mode.
- Dialler Client Codes for transmission to a central station can be entered in HEX.
- Mains fail alarm can be disabled.
- Test report clock can be programmed to use the internal oscillator for timing.
- Zones can be selected not to flash the Memory icon.
- RK4 Radio Key AUX button can be mapped to the D8/D16 Aux2 output.

V4.5

- Monitor Arming By Radio Key. Pressing the ON button twice can now be used to enter MONITOR mode. This addition was done to allow MONITOR mode arming using a RADIO keypad.
- Test Call Timing. When sending Test Calls, the time between dialling attempts is increased to 60 minutes for the 2nd round of dialling.
- Arming from Monitor Mode. Arm Only codes can arm the panel directly from Monitor Mode. (Normal user codes can arm only from the disarmed state.)
- Strobe Timeout. Strobe output will time out after 72 hours. This stops continuous strobe operation when the alarmed premises are vacant for long periods.
- Software Version. The software version of the panel is displayed in Program mode by entering P99999999E (eight 9's).

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PACKING LIST

100-687 Ness D16 Control Panel

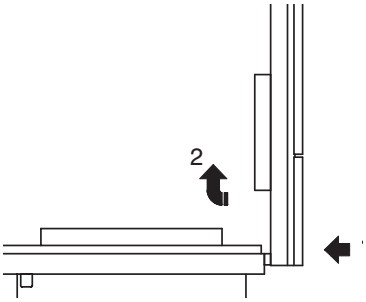
QTY	DESCRIPTION
1	D16 main board
1	D16 housing
1	Ness LCD keypad (100-667)
1	17VAC plug pack
1	12V 7Ah battery (optional)
1	Dialler telephone lead
1	User manual
1	Installer manual
9	2.2K End Of Line resistors
8	4.7K End Of Line resistors
1	Lead assembly for Battery
1	Lead assembly for Internal Tamper
1	Tamper bracket
1	Zone list label
2	Housing cover screws
2	Circuit board standoff

D16 SPECIFICATIONS

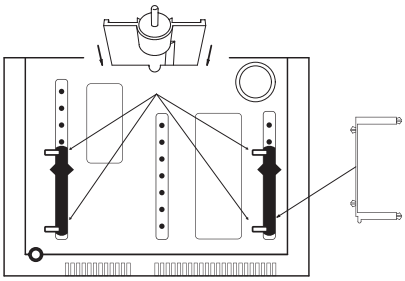
Box construction ..... 3mm Polycarbonate (equiv. 1.2mm mild steel)
Box Dimensions ..... 223W x 300H x 85D mm
Plug Pack ..... 240Vac, output 17Vac@1.4A
Power Supply ..... 13.8Vdc @ 800mA
Quiescent Current ..... 80mA with 1 Keypad
Operating Voltage ..... 9.5V- 14V dc
Rechargeable Battery ... 12 volt 7.0 Amp/hour, lead acid
Battery Charging current 350mA maximum, current limited
Dynamic Battery Test .... Every Hour and on arming 10.75V with a 5 amp load
Fuses ..... 2 Amp resettable / sirens & reset.
500mA resettable / 12 volt auxiliary outputs
200 mA resettable / strobe output

INPUTS ..... 8 physical Zone inputs
(16 Zones inputs with Zone Split enabled)
2 physical 24hr Tamper inputs
End of line resistor ..... 2200 Ohm (or Zone Split 2200 Ohm & 4700 Ohm)
Remote Keypad input .... Proprietary
Maximum Keypads 3
J2 Header ..... Multi-pin connector for the Ness Radio Interface (100-200)

OUTPUTS
Siren ..... On board siren driver. Timed output.
Maximum 3 x 8 Ohm horn speakers
Strobe ..... 12V DC timed output. Maximum 2 x 1 Watt strobe lights
Reset ..... 12V DC timed output. Maximum 3 x 12V piezo screamers
Equipment power output 13.8V DC output for powering detectors and other equipment.
Maximum 500mA.
J3 Header ..... Multi-pin connector provides the outputs AUX1, AUX2, ARM1, ARM2, 12V DC. Also used to connect to the D16 Output Expander (100-699).



HOW TO REMOVE THE LID



INSTALLING PCB STANDOFFS
& TAMPER BRACKET

INSTALLATION PROCEDURES

The location of the main panel housing should be in an area that is within the protected area of the premises. A linen closet or cupboard are good examples as these are generally located in the centre of the Premises.

Positioning of the movement detectors should be considered as the incorrect position may cause unwanted alarms.

1. Unclip the lid by pushing in the directions of the arrows 1 and 2 as shown below.
2. Remove the Battery from the base.
3. Mount the rear panel housing to a secure location.
4. Insert the PCB stand-offs in the Panel and then plug the circuit board onto the stand-offs.
5. Wire to the circuit board terminal blocks, as per the wiring instructions shown in this installation manual.
6. Replace the Battery.
7. Insert the panel tamper bracket as shown at left.
8. Program the control panel as required

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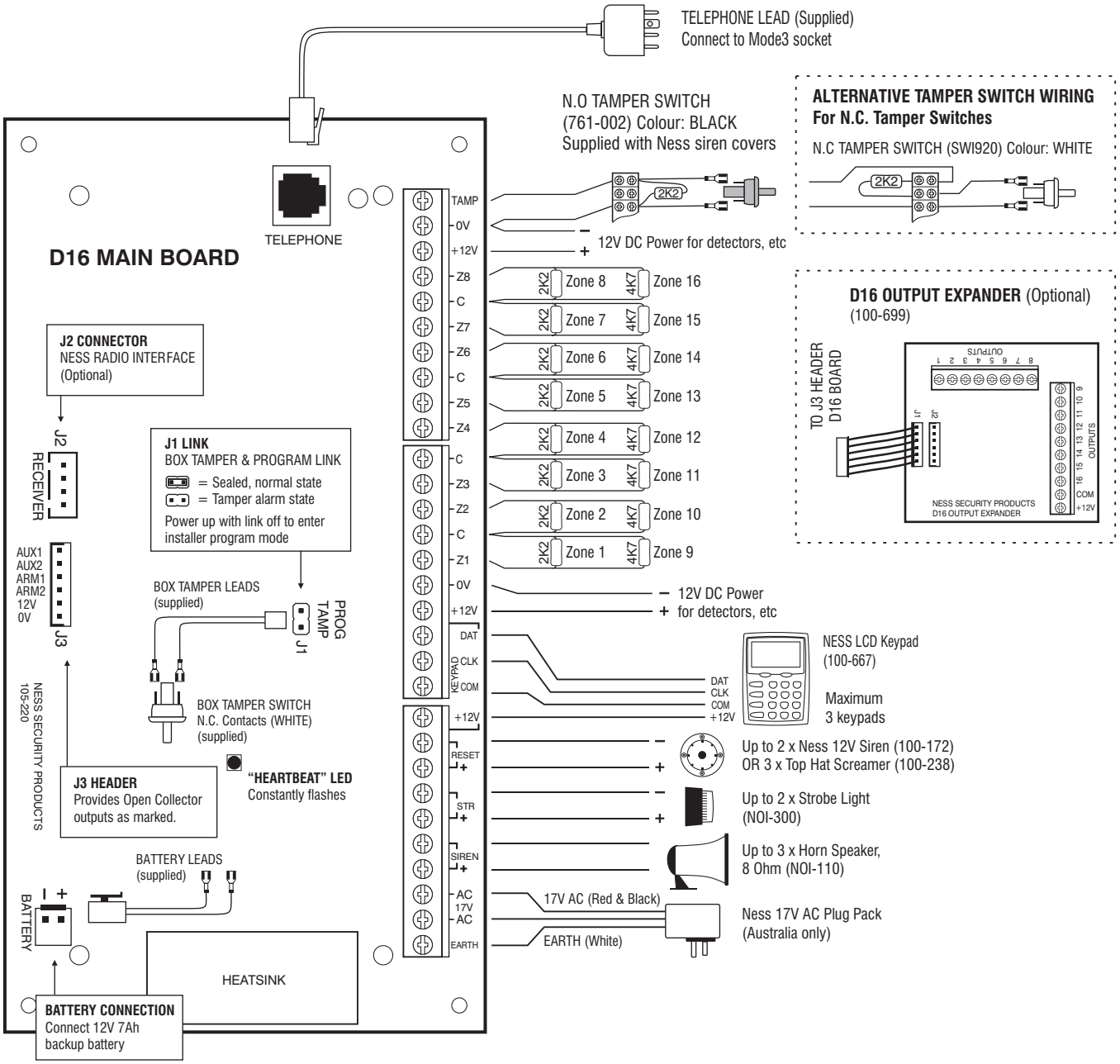
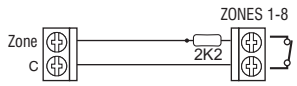


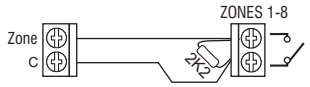
ZONE WIRING

NO ZONE SPLIT - Panel has 8 zones	**WITH ZONE SPLIT** - Panel has 16 zones

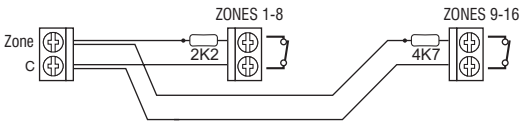
NORMALLY CLOSED (N.C.) DEVICES



NORMALLY OPEN (N.O.) DEVICES

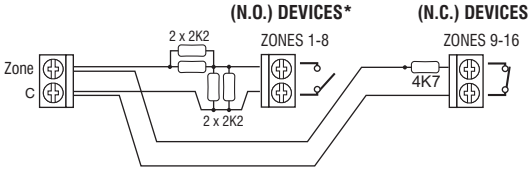


NORMALLY CLOSED (N.C.) DEVICES



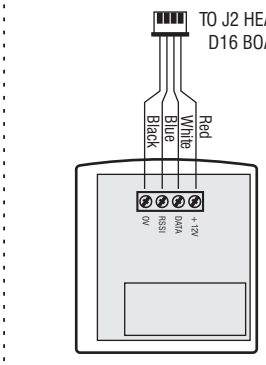
NORMALLY OPEN (N.O.) DEVICES*

NORMALLY CLOSED (N.C.) DEVICES



* When Zone Split is enabled, Normally Open devices can only be wired to zones 1-8 as shown.
See page 35 for more information.

NESS RADIO INTERFACE (Optional)
(100-200)



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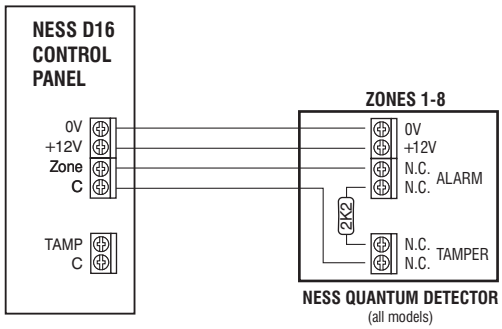
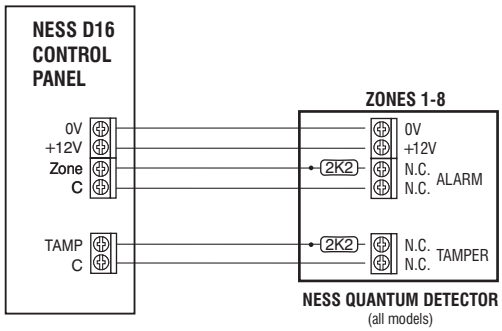
NO ZONE SPLIT

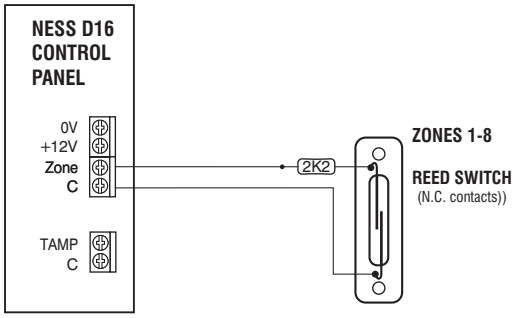
EXAMPLE 1 DETECTORS - 4 WIRE CONNECTION



EXAMPLE 2 DETECTORS - 6 WIRE CONNECTION

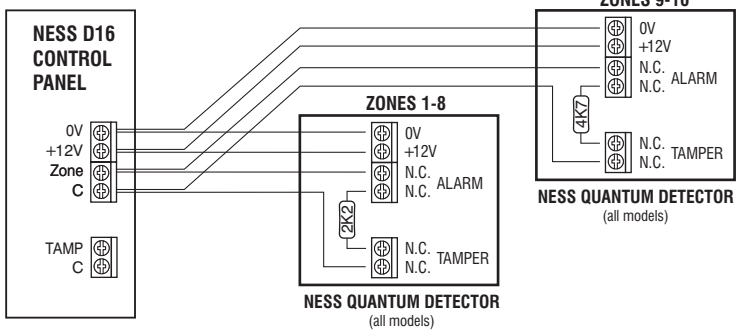


EXAMPLE 3 N.C. REED SWITCH

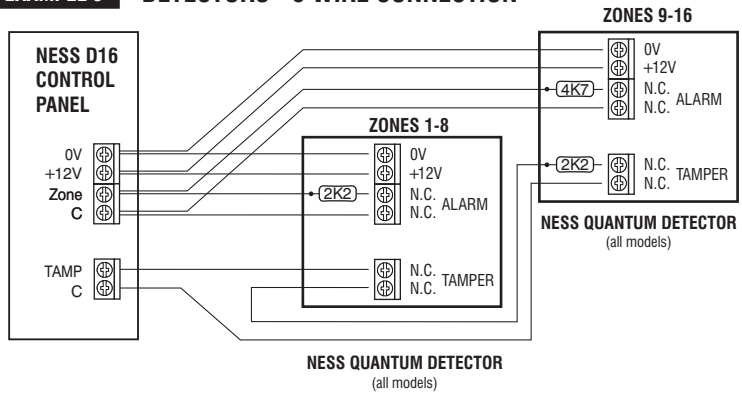


WITH ZONE SPLIT

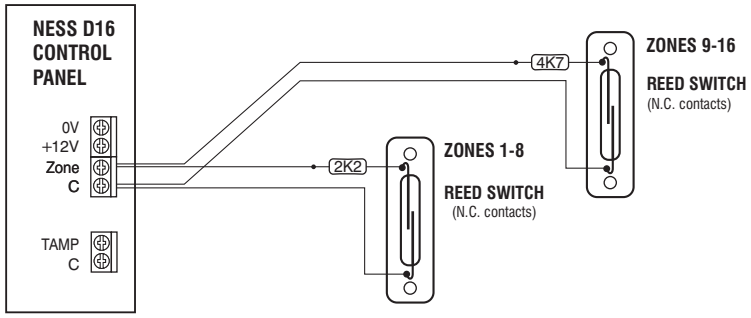
EXAMPLE 4 DETECTORS - 4 WIRE CONNECTION



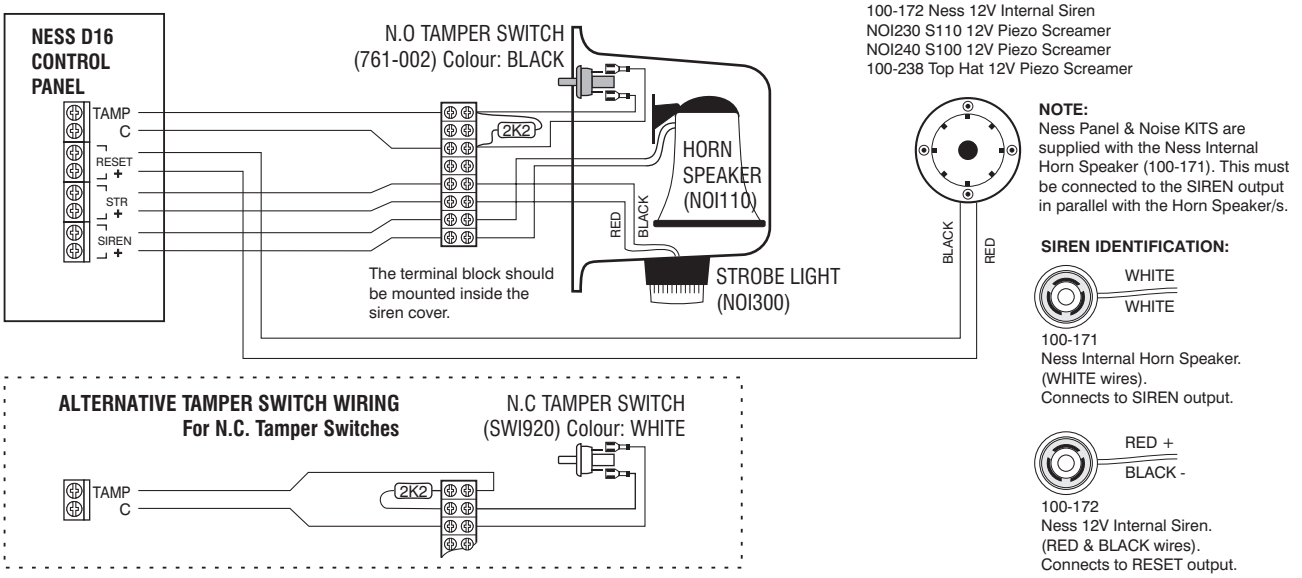
EXAMPLE 5 DETECTORS - 6 WIRE CONNECTION



EXAMPLE 6 N.C. REED SWITCH



EXAMPLE 7 SIREN WIRING



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INPUTS

MONITORED ZONES

The Ness D16 has 18 separate monitored inputs.

- 16 x Fully programmable Zone inputs
- 2 x 24 hour Tamper input

ZONE INPUTS

Each zone input must be terminated with a 2K2 (2200 ohm) or 4K7 if Zone Split end-of-line resistor as supplied. All inputs must be sealed with an EOL resistor even if unused.

If there are two detection loops being used for any single zone input, then cable security may be provided on both loops as shown in the series Zone diagram below. Note: Each pair of zones share a common terminal.

For wiring details of Keypads, Keyswitches, Panic Buttons and Warning devices, see the wiring diagrams in the wiring section of this manual.

TAMP - Tamper Input

The TAMP input must also be sealed with a 2K2 end of line resistor. This input is always a 24hr input.

AC INPUT TERMINALS

These terminals are for the connection of the Ness plug-pack. The Ness D-8 requires an AC transformer rating of 1.4 Amps @ 17 Vac minimum. (Ness Part No. POW215)

BATTERY

These terminals are for the connection of a sealed lead-acid rechargeable 12Volt battery. Charge current is limited to 350mA. The charge voltage is factory preset at 13.8 V and does not need changing. Note: A 12 Volt sealed lead acid rechargeable battery must be connected for correct panel operation. Observe correct Polarity when connecting the battery.

(Ness Part Number BAT210 12V 7Ah battery)

EARTH

For maximum protection against damage caused by lightning strikes, connect a good earth to this terminal. Alternatively use the Earth lead from the plug pack.

PROG/TAMP - Program Link & Internal Tamper Input

The PROG/TAMP link appears on the two pin J1 header.

The PROG/TAMP link has two purposes:

1. **To enter Installer Program Mode on initial power up**. Power-up with the PROG link OFF. The PROG link (or Box Tamper lead) must be ON in operating mode.
2. **Box Tamper.** When used with the Internal Tamper Lead (supplied), PROG/TAMP serves as the 24hr tamper input for the panel's internal tamper switch.

   Replace the PROG Link with the Box Tamper Lead. Connect the Internal Tamper Lead spade terminals directly to the terminals of the internal tamper switch (supplied). An end-of-line resistor is NOT required on this input.

   When PROG/TAMP is used for Internal Tamper, powering up with the panel's cover open will enter Installer Program Mode.

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AUX OUTPUTS

The D8 and D16 Aux1 and Aux2 outputs can now be driven by a number of different conditions and alarms.

The following is a summary of the Aux1 and Aux2 program options and conditions.

AUX1 CAN BE TRIGGERED BY:

• Any zone alarm if programmed by option P58E. The output remains on until the panel is reset/disarmed.

• A Radio Supervision alarm if option P66E 5E is on. The output remains on until the panel is reset/disarmed.

• Remotely by telephone.

• A Ness RK3 or RK4 Radio Key PANIC button if options P68E 3E or 4E are on.

(if 3E is on, the output Toggles, if 4E is on, the output Pulses. If both 3E & 4E are on, the output will Pulse).

• A Ness RK4 Radio Key AUX button if options P68E 3E or 4E and 7E are on.

AUX2 CAN BE TRIGGERED BY:

• Any zone alarm if programmed by option P59E. The output remains on until the panel is reset/disarmed.

• A Radio Supervision alarm if option P66E 6E is on. The output remains on until the panel is reset/disarmed.

• Remotely by telephone.

• A Ness RK4 Radio Key AUX button if option P69E 7E or 8E are on.

(if 7E is on, the output Toggles, if 8E is on, the output Pulses. If both 7E & 8E are on, the output will not work).

NOTE: Aux1 and Aux2 will both be turned off by a Pulse on *any* other output, (including siren/strobe).

For example, if either Aux output is toggled on, the output will be turned off by the Radio Key arm/disarm strobe flash.

This makes it necessary to disable all 'pulsing' outputs if toggled Aux outputs are to work correctly.

OUTPUTS

12 VOLT OUTPUT:
A regulated 13.8 VDC output is available to power detectors and other equipment. This output is available from two sets of terminals marked +12V and 0V. The output is protected by an Automatic Reset fuse.

A maximum load of 500mA may be connected to these terminals.

SIREN:
The on-board siren driver will drive a maximum of 3 x 8 ohm horn speakers (Ness Part No. NOI110 or 100-171 Internal Siren). The output will reset at the end of siren time (P29E) or whenever the panel is reset, whichever comes first. This output has an internal Resettable fuse.

STR - Strobe:
A latched 12VDC output for connecting strobe lights. As of D16 Version 4.5, this output will reset after 72 hours (3 days) or when the panel is disarmed. (D16 versions prior to V4.5 allow indefinite strobe operation, until the panel is reset).

A maximum of 2 x 1 Watt Strobes (Ness Part No. NOI300) can be connected to this output. The output is protected by an Automatic Reset fuse.

RESET:
A 12V DC output for connecting Ness Sirens, piezo sirens or relays, etc. This output will reset at the end of siren time (P29E) or whenever the panel is reset, whichever comes first.

A maximum of 3 x 12V piezo Sirens (Ness Part No. NOI240, NOI 230, 100-238) or 2 X Ness Piezo (Part No 100-172) can be connected to this output. The output is protected by an Automatic Reset fuse.

J3 HEADER
Aux1: This output is an open collector (switch negative) which can supply a maximum of 100mA. Zone alarms may be selected to trigger this output by option P58E.

The J3 header is also used to connect to the optional D16 Output Expander.

Aux2: This output is an open collector (switch negative) which can supply a maximum of 100mA. Zone alarms may be selected to trigger this output by option P59E.

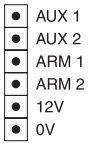
Arm1: This output is an open collector (switch negative) which can supply a maximum of 100mA. This output is turned on when Area 1 is armed.

Arm2: This output is an open collector (switch negative) which can supply a maximum of 100mA. This output is turned on when Area 2 is armed.

12V: 12V DC ouput for accessories. Maximum current draw 100mA.

0V: 12V ground.

J3
OPEN COLLECTOR
OUTPUTS



OUTPUT FUSING
The 12V ouputs, Siren, Reset and Strobe outputs are protected by Automatic Reset electronic fuses. These outputs will automatically reset once the overload is removed.

BACKUP BATTERY
A properly charged battery MUST be installed to ensure the Siren, Strobe and Reset outputs operate correctly.

SIREN LOAD
A maximum output of 2.0A continuous is available from the SIREN, and RESET outputs and 200mA from the STR output.

Recommended maximum power load:
3 x Horn speakers (SIREN output)
2 x Strobe lights (STR output)
2 x Ness Internal Sirens (100-172) (RESET output)

Note: *(This assumes no more than 500mA is being drawn from the 12V device output).*

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D16 LCD KEYPAD

The Ness LCD keypad provides important visual and audible indication of the system status and is the main interface for controlling the many powerful features of the D16 system.

Information is displayed on a large LCD icon display which is backlit for easy night viewing.

DISPLAY TEST

To display all the keypad icons press and hold the (E) button for at least 2 seconds. All the icons will be on whilst the (E) button is held down.

Display Test can be activated at any time either in operating mode or any program mode.

NUMBER OF KEYPADS

Up to **3 LCD keypads** can be connected to the D16.

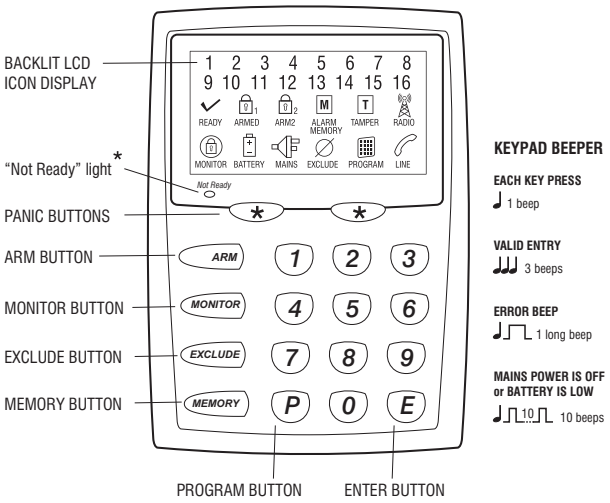
CABLE LENGTH

The maximum allowable **cable length** is 100m (total cable length to all keypads) .

KEYPAD INSTALLATION

- Unclip the top half of the keypad housing by pushing the top clips down with a small screwdriver and pulling the housing forward.
- Screw the base of the keypad housing to the wall using the 4 mounting holes provided.
- Bring the 4 connecting wires to the terminal block on the PCB on the rear of the keypad housing.
- Connect the wires to the screw terminals as per the wiring diagram shown in this manual.
- Clip the top half onto the base by first engaging the bottom clips and swinging the top closed. Push hard to ensure the clips engage.
- Attach the Zone list label on the inside of the lid.

NESS D816 LCD KEYPAD (100-667)



KEYPAD ICON DISPLAY	KEYPAD ICON STATUS		
	● OFF	○ ON	☼ FLASHING
ZONES 1-16	Zone is sealed	Zone is unsealed	Zone alarm
READY	Zone is unsealed, or Power fault or System is Armed, or phone line fault	Ready to Arm	
1 ARMED	Disarmed	Armed (AREA 1)	Monitor Mode (LED Keypad only)
2 ARM2	Disarmed	Armed (AREA 2)	
MONITOR	Disarmed	Monitor Mode	
MAINS	Normal		Mains Power is off
BATTERY	Normal		The panel's backup battery is low
M ALARM MEMORY	Normal	Memory Mode selected	New alarms in memory
EXCLUDE	Normal		Zones are excluded
T TAMPER	Normal		Tamper alarm
RADIO	Normal	Receiving radio signal	Indicates that a Radio Key or other radio device has a low battery
LINE	Normal	Dialler is on line	Phone line fault or failure to communicate
PROGRAM	Normal	User Program Mode	Installer Program Mode
Not Ready	Ready to Arm	Not ready to Arm	

MEMORY MODE - EVENTS INDICATED BY KEYPAD LIGHTS:

LIGHT	MEMORY EVENT
Zone lights 1–16	Zone alarm
(no lights)	Panel Disarmed
ARMED	Panel Armed (or Area 1 Armed)
ARM2	Area 2 Armed
MAINS	Mains power failure
BATTERY	Low Battery
TAMPER	Tamper alarm (Siren cover, panel etc)
EXCLUDE	Panic alarm
LINE	Telephone line fail
RADIO, EXCLUDE	Radio Key Panic alarm
RADIO, BATTERY, ZONE	Radio Device battery low, (Device number is indicated by zone lights)
RADIO, BATTERY, ARM	Radio Key battery low, (Radio Key number is NOT indicated)
RADIO, TAMPER, ZONE	Radio Device tamper alarm (Device number is indicated by zone lights)
RADIO, MONITOR, ZONE	Radio Supervision fail (Device number is indicated by zone lights)

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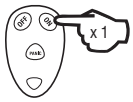
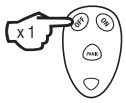
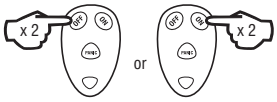
D16 OPERATION SUMMARY

OPERATION	LCD KEYPAD	RADIO KEY
ARM The panel must be in a Disarmed state first.*	ARM E (Arming Shortcut must be ON, P62E 5E) or... ARM [User Code] E	
DISARM To Disarm and/or reset alarms.	[User Code] E	
MONITOR MODE The panel must be in a Disarmed state first.	MONITOR E (Monitor Shortcut must be ON, P62E 3E) or... MONITOR [User Code] E	 Press OFF button twice within 4 seconds or ON button twice within 4 seconds **P69E 5E must be ON**
PANIC	* * **Both keys together** or... * [User Code] E or... * E (Keypad Panic Shortcut must be ON, P62E 4E)	Press and hold for 4 seconds (P68E 3E & 4E must be OFF)
KEYPAD DURESS Keypad Duress is factory set for silent reporting	[5, 6, 8 or 9] [User Code] E To Disarm and report a Duress Alarm, add any of the digits 5, 6, 8 or 9 before the User Code when Disarming. **P75E1E must be enabled**	
EXCLUDING ZONES EXCLUDE + ENTER can only be used when the panel is disarmed. EXCLUDE + CODE + ENTER can be used when the panel is armed or disarmed.	EXCLUDE E (Exclude Shortcut must be ON, P62E 2E) or... EXCLUDE [User Code] E [Zone No.] E [Zone No.] E Enter the zone numbers to be Excluded E To exit Exclude mode	
VIEW MEMORY View Memory can only be used when the panel is disarmed.	MEMORY E (Memory Shortcut must be ON, P62E 1E) or... MEMORY [User Code] E Press MEMORY repeatedly to display the last 30 events E To exit Memory mode	

* NOTE ON ARMING: Normal user codes can arm the panel only if it is fully disarmed first. User codes that are programmed to be Arm Only codes can arm the panel from Monitor mode or from the disarmed state.

TEMPORARY DAY ZONES The panel must be in a Disarmed state first.* P64E 2E must be on for enable the use of Temporary Day Zones.	P + E Enters Temporary Day Zone selection mode. [Zone No.] + E Select zone/s to be Temporary Day Zones. E Saves changes and exits Temporary Day Zone selection mode. 0 + E Enables/disables Temporary Day mode.

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QUICK START PROGRAMMING

Use one of these programming summaries for fast setup of your D16 as a Local, Audible Monitored or Central Station Monitored system.

The control panel will be ready for use immediately.

QUICK START 1

LOCAL SYSTEM

Quick Start 1 shows you how to change User Code 1 (the Master Code).

By default, the dialler is disabled until programmed.

QUICK START 1 - step by step

STEP	KEY STROKES	DESCRIPTION	COMMENT
1	(P)(1)(2)(3)(E)*	Enter User Program Mode	Program Light is ON
2	(P)(1)(1)(E)	Selects the option for User Code 1	The **existing** code is displayed by the keypad lights, followed by 3 beeps
3	◯◯◯◯(E)	Enter the new User Code	Can be 3 to 6 digits long
4	◯◯◯◯(E)	Enter the new User Code again	The **new** code is displayed by the keypad lights, followed by 3 beeps
5	(P)(E)	To exit Program Mode	Program light turns OFF

QUICK START 2

AUDIBLE MONITORING

Quick Start 2 shows you how to change User Code 1 (the Master Code), enable Audible Monitoring and program 1 telephone number. This will enable the dialler to report alarms to any telephone including mobile phones.

QUICK START 2 - step by step

STEP	KEY STROKES	DESCRIPTION	COMMENT
1	(P)(1)(2)(3)(E)*	Enter User Program Mode	Program Light is ON
2	(P)(0)(0)(0)(0)(0)(0)(E)*	Enter Installer Program Mode	Program Light is FLASHING
3	(P)(1)(1)(E)	Selects the option for User Code 1	The **existing** code is displayed by the keypad lights, followed by 3 beeps
4	◯◯◯◯(E)	Enter the new User Code	Can be 3 to 6 digits long
5	◯◯◯◯(E)	Enter the new User Code again	The **new** code is displayed by the keypad lights, followed by 3 beeps
6	(P)(8)(6)(E)(4)(E)	At P86E, turns ON option 4	Audible Monitoring enabled
7	(P)(7)(0)(E)	Selects the option for Telephone No.1	
8	◯ ····· Up to 15 digits ····· ◯(E)	Enter the telephone number	Can be up to 15 digits long
9	(P)(E)	To exit Program Mode	Program light turns OFF

See page 46 for further information on the operation of Audible Monitoring.

QUICK START 3

CENTRAL STATION MONITORING

Quick Start 3 shows you how to change User Code 1 (the Master Code), enable Central Station Monitoring and program 1 telephone number. This will enable the dialler to report alarms to a Central Station.

QUICK START 3 - step by step

STEP	KEY STROKES	DESCRIPTION	COMMENT
1	(P)(1)(2)(3)(E)*	Enter User Program Mode	Program Light is ON
2	(P)(0)(0)(0)(0)(0)(0)(E)*	Enter Installer Program Mode	Program Light is FLASHING
3	(P)(1)(1)(E)	Selects the option for User Code 1	The **existing** code is displayed by the keypad lights, followed by 3 beeps
4	◯◯◯◯(E)	Enter the new User Code	Can be 3 to 6 digits long
5	◯◯◯◯(E)	Enter the new User Code again	The **new** code is displayed by the keypad lights, followed by 3 beeps
6	(P)(8)(6)(E)(2)(E)[1]	At P86E, turns ON option 2	Central station Monitoring enabled
7	(P)(7)(0)(E)	Selects the option for Telephone No.1	Existing Ph No (if any) displayed
8	◯ ····· Up to 15 digits ····· ◯(E)[2]	Enter the Telephone Number	Can be up to 15 digits long
9	(P)(7)(2)(E)[3]	Enter the Account Number	Must be 4 digits
10	(P)(E)	To exit Program Mode	Program light turns OFF

[1] Option P86E 2E is ON by factory default. This option only needs to be turned ON if previously programmed OFF.

[2] The Central Station's receiver telephone number - supplied by the Central Station

[3] Account Number to identify the premises - supplied by the Central Station

* Factory default Master Code is: 123
* Factory default Installer Code is: 000000

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FACTORY DEFAULT

MASTER CODE: 123
INSTALLER CODE: 000000

INSTALLER PROGRAM MODE

Installer Program Mode allows access to ALL program options.

Note: The panel will remain in Installer Program Mode indefinitely.

USER PROGRAM MODE

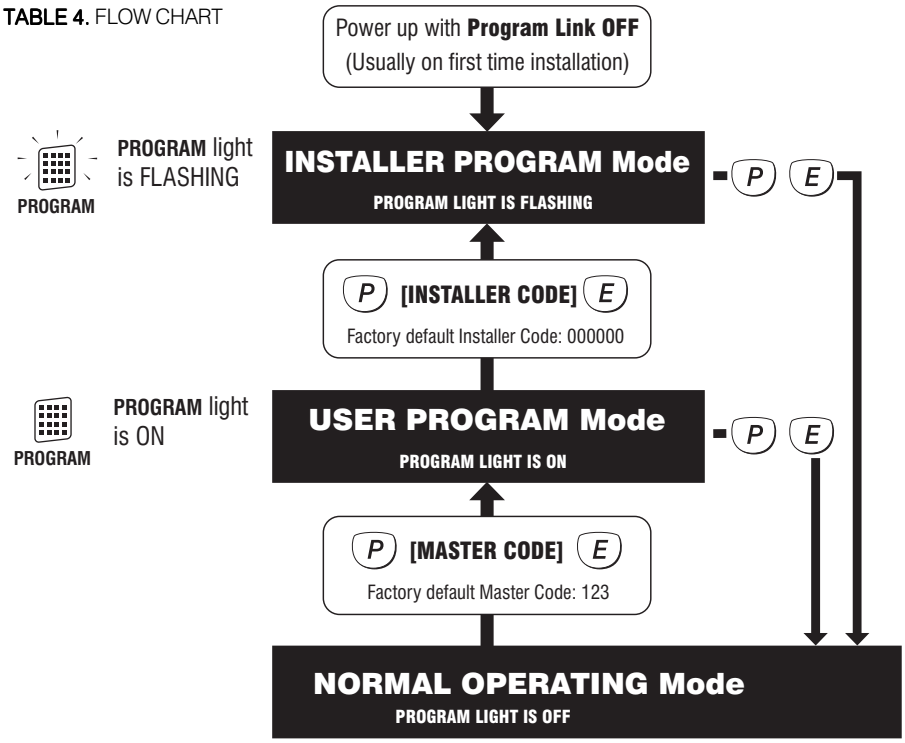
User Program Mode allows the owner to program:

- All User Codes
- Entry Exit Times
- Follow Me Telephone number

Note: The panel will automatically drop out of User Program Mode to Operating Mode if no keypad buttons are pressed for 4 minutes.

PROGRAM MODE LEVELS

TABLE 4. FLOW CHART



HOW TO ENTER PROGRAM MODE

A FROM POWER UP

1. Power-up with the PROG link OFF.
   (The PROG link (or Box Tamper lead) must be ON in Operating Mode).

B USING KEYPAD

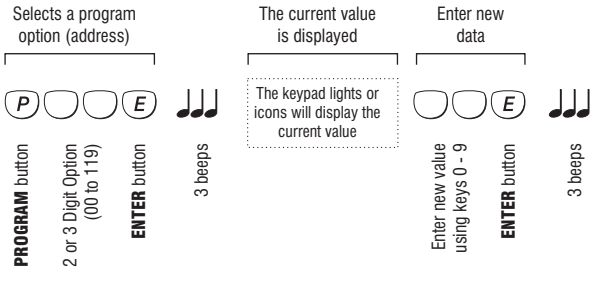
The panel must be Disarmed.

1. Press P **[MASTER CODE]** E The keypad will respond with 3 beeps ♩♩♩
   This is User Program Mode (PROGRAM light is ON).
2. Press P **[INSTALLER CODE]** E The keypad will respond with 3 beeps ♩♩♩
   This is Installer Program Mode (PROGRAM light is FLASHING).

HOW TO EXIT PROGRAM MODE

1. Press P then E
   This is Operating Mode (PROGRAM light is OFF).

KEY SEQUENCE IN PROGRAM MODE


Selects a program option (address)
The current value is displayed
Enter new data
P E ♩♩♩
The keypad lights or icons will display the current value
E ♩♩♩
PROGRAM button
2 or 3 Digit Option (00 to 119)
ENTER button
3 beeps
Enter new value using keys 0 - 9
ENTER button
3 beeps

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P11E — P25E

PROGRAM MODE LEVEL:
User, Installer, Remote by PC

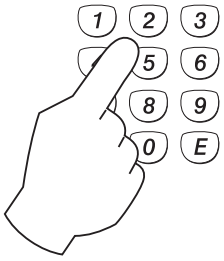
FACTORY DEFAULT:
User Code 1: 123
Installer Code: 000000
All other codes: [blank]

NOTES:
- User Codes can be 3 to 6 digits in length.
- Codes beginning with 0 (zero) can be programmed but they *will not* operate the panel - this is an alternative method for disabling user codes. The MEMORY E function is recommended for deleting user codes.
- All codes must be unique to each other.
- User Codes 2–15 can be programmed to be ARM ONLY codes.
- When programming a code you must enter it twice for verification.
- To clear all codes (except the Installer Code), enter P98E in Installer Program mode. See Page 55.
- Codes are rejected if already used. Some codes that are similar to existing codes may also be rejected.
- Open/Close reports are identified by user number when the control panel is base station monitored.

INSTALLER CODE NOTES:
The function of the Installer Code is to gain access to Installer Program Mode.

See Page 13, How To Enter Program Mode.

See page 55, Programming The Installer Code.



Radio Key programming, Page 56

USER CODES

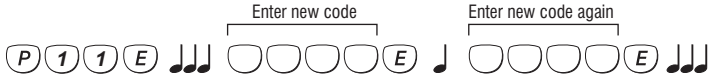
User codes are the 3 to 6 digit codes used to operate the panel by keypad.

User Codes 1-15: Used to arm/disarm the panel. These codes can also be programmed as Arm Only codes. User Code 1 is also the Master Code which is used to access Client Program mode.

PROGRAMMING SEQUENCE:

P [11-25] E *existing code is displayed*
[ENTER NEW CODE] E
[ENTER NEW CODE AGAIN] E *new code is displayed*

EXAMPLE: To program the Master Code



TO DELETE A CODE:

To delete a User Code, enter the MEMORY key in place of the code.

EXAMPLE: To delete User Code 2:
P12E MEMORY E

ARM ONLY CODES

User Codes 2–15 can optionally be programmed as Arm Only Codes, which can Arm but cannot Disarm the panel. (Used for cleaners, temporary staff, etc).

Another feature of Arm Only codes is they can arm the panel directly from Monitor Mode. (Normal user codes can arm the panel only if it is fully disarmed first.)

EXAMPLE: To program User Code 2 to be 1234 and an Arm Only code:
P12E ARM E 1234E 1234E

When the code is viewed in program mode, the ARMED icon is displayed before the digits of the code.

ARM ONLY CODE DISABLE

To deselect the Arm Only feature for a particular user code, simply enter the option for that code and press ARM E without re-entering a new code. This retains the existing code and toggles off the Arm Only feature.

CODE TABLE

CODE	OPTION No	DESCRIPTION	FACTORY DEFAULT	ENABLE AS A RADIO CODE
User Code 1	P11E	Master Code	123	(Keypad Code only)
User Code 2	P12E			2E
User Code 3	P13E			3E
User Code 4	P14E			4E
User Code 5	P15E			5E
User Code 6	P16E			6E
User Code 7	P17E			7E
User Code 8	P18E			8E
User Code 9	P19E			1E
User Code 10	P20E			2E
User Code 11	P21E			3E
User Code 12	P22E			4E
User Code 13	P23E			5E
User Code 14	P24E			6E
User Code 15	P25E			7E
Installer Code	P99E	Installer Code	000000	

P09E

P10E

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OPTION No	DESCRIPTION	DEFAULT	NOTE
P26E	Entry Delay Time 1	20	Seconds
P27E	Entry Delay Time 2	6	x10 = 60 seconds
P28E	Exit Delay Time	60	Seconds
P29E	Siren Reset Time	5	Minutes

P26E

PROGRAM MODE LEVEL:
User, Installer, Remote by PC

FACTORY DEFAULT:
20 seconds

NOTES:
- Programmable from 1 - 99 seconds

ENTRY DELAY TIME1

The Entry Delay Time 1 is the time given to disarm the Panel after a Entry Delay 1 zone is unsecured.

The Entry Delay Time1 setting is from 1 to 99 seconds.

PROGRAMMING SEQUENCE:

P26E *existing time is displayed* **[ENTER NEW TIME] E** *new time is displayed*

EXAMPLE: To program Entry Delay Time1 to be 30 seconds:
P26E 30E

P27E

PROGRAM MODE LEVEL:
User, Installer, Remote by PC

FACTORY DEFAULT:
60 seconds

NOTES:
- Programmable from 10 - 990 seconds

ENTRY DELAY TIME2

The Entry Delay Time2 is the time given to disarm the panel after an Entry Delay2 zone is unsecured.

The Entry Delay Time2 setting is from 10 to 990 seconds (1 - 99).

Note: The Entry Delay Time2 is set in 10 second increments so that a value setting of 6 means a 60 seconds delay.

PROGRAMMING SEQUENCE:

P27E *existing time is displayed* **[ENTER NEW TIME] E** *new time is displayed*

EXAMPLE: To program Entry Delay Time2 to be 600 seconds:
P27E 60E

P28E

PROGRAM MODE LEVEL:
User, Installer, Remote by PC

FACTORY DEFAULT:
60 seconds

NOTES:
- Programmable from 1 - 99 seconds
- RELATED OPTIONS:
  P62E 8E Exit Time x10

EXIT DELAY TIME

The Exit Delay Time is the time given to secure and depart the premises after the Panel is Armed. All zones (except 24hr zones) are inactive during the Exit Delay time.

The Exit Delay Time setting is from 1 to 99 seconds.

PROGRAMMING SEQUENCE:

P28E *existing time is displayed* **[ENTER NEW TIME] E** *new time is displayed*

EXAMPLE: To program Exit Delay to be 85 seconds:
P28E 85E

P29E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
5 minutes

NOTES:
- Programmable from 1 - 99 minutes
- Siren times of longer than 5 minutes are contrary to noise pollution regulations in most areas.

SIREN RESET TIME

The Siren Reset Time sets the duration of the Siren and Reset outputs.

The Siren Reset Time setting is from 1 to 99 minutes.

PROGRAMMING SEQUENCE:

P29E *existing time is displayed* **[ENTER NEW TIME] E** *new time is displayed*

EXAMPLE: To program Siren Time to be 4 minutes:
P29E 4E

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P30E - P38E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
Normal sensitivity.
P30E, all zones = ON

NOTES:

- Sensitivity can be individually programmed for each zone.
- Zones are allocated to one sensitivity level at any one time. Turning a zone ON in a sensitivity level, turns the zone OFF in any other sensitivity level.
- To revert zone sensitivity back to Normal. Turn the required zone/s ON at Option 30.
- **USING NESSENSORS.**

  Nessensors are sensitive to high frequencies and insensitive to low frequencies. Therefore it is not necessary to apply much force to the protected structure, rather a very rapid succession of blows.

  The sensitivity has been correctly adjusted when a single blow applied with a soft object (e.g. by hand) does not cause an alarm whereas a rapid series of blows (using a metal object such as a screwdriver blade) will cause an alarm.

VIBRATION SENSITIVITY

Each zone has individually adjustable sensitivity for connection of Nessensor Vibration Sensors.

Zone sensitivity is adjusted by toggling zones ON or OFF in options P30E to P38E.

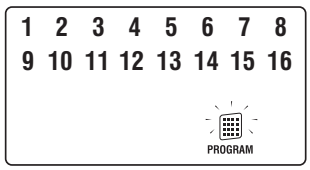
P30E, Normal Sensitivity- vibration analyser disabled. This is used for normal alarm devices. Zone response time, 200ms.

P31-38E are the options for the 8 levels of vibration sensitivities. P31E is the most sensitive setting.

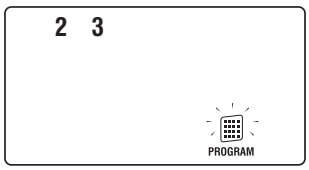
PROGRAMMING SEQUENCE:

P [30-38] E *zones are displayed* **[Zone No] E**

EXAMPLE: To program zones 2 and 3 to be Medium Sensitivity:
P34E 2E 3E *the keypad display will show zone lights 2 & 3 to be ON*



Factory Default Setting for P30E.
All zones selected ON = Normal sensitivity.



Example P34E: Zones 2 & 3 are Medium sensitivity.

VIBRATION SENSITIVITY

OPTION No	SENSITIVITY	Zones 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P30E	**Normal**	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P31E	High																
P32E																	
P33E																	
P34E																	
P35E																	
P36E																	
P37E																	
P38E	Low																

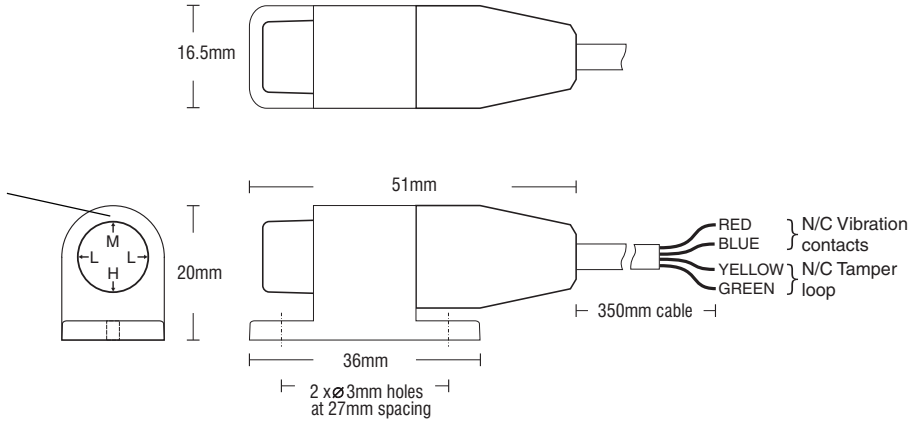
ON = Factory default setting

DO NOT USE P31 AND P38 SENSITIVITY - THEY ARE PROVIDED AS A GUIDE TO THE UPPER AND LOWER LIMITS.

Ness NESSENSOR Vibration sensor Part No. VIB100

In addition to zone sensitivity adjustment, the overall sensitivity of the Nesssensor can be adjusted by rotating the body of the Nesssensor within its bracket.

The bracket must always be mounted horizontally and the arrow must point up for any required setting.



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ZONE ASSIGNMENT

DELAY GROUP
Only one option allowed per zone

OPTION No	DESCRIPTION	Zones 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P39E	Double Trigger zones																
P40E	Instant zones			ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P41E	Entry Delay 1 zones	ON															
P42E	Handover zones		ON														
P43E	Entry Delay 2 zones																
P44E	Lockout zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P45E	Area 1 zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P46E	Area 2 zones																
P51E	Monitor zones																
P52E	24Hr zones																
P53E	Day zones																

ON = Factory default setting

P39E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No Double Trigger zones

NOTES:
- Double Trigger is useful for preventing unwanted alarms from zones in harsh environments such as sheds and garages.
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

DOUBLE TRIGGER ZONES

Zones programmed to Double Trigger will recognise an alarm condition if:

- The zone has been triggered twice within a 4-minute period.
- If any 2 zones (both programmed for double trigger), each trigger once.
- The zone is left unsealed for longer than 15 seconds.

PROGRAMMING SEQUENCE:

P39E [Zone No]E *toggles the options ON and OFF*

P39E [Zone No]E OFF: The zone is not a Double Trigger zone
P39E [Zone No]E ON: The zone is a Double Trigger zone

P40E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
3E-16E ON: Zones 3-16 are Instant

NOTES:
- When a zone is selected for this type, it is automatically deselected from any other zone type in the DELAY GROUP

INSTANT ZONES

Instant zones operate only in the Armed state. When Armed at the expiry of exit time Instant Zones will activate assigned outputs immediately when triggered.

P40E [Zone No]E *turns the options ON*

P40E [Zone No]E ON: The zone is an Instant zone
To deselect the option, select a different zone type in the DELAY GROUP.

P41E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
1E ON: Zone 1 has Entry Delay1

NOTES:
- The keypad sonalert will beep during Entry Delay as a reminder to disarm the panel. Entry beeps can be disabled by program option P60E 1E.
- When a zone is selected for this type, it is automatically deselected from any other zone type in the DELAY GROUP

ENTRY DELAY1 ZONES

Entry Delay1 zones operate only in the Armed state. When Armed, at the expiry of exit time these zones will activate the Entry Delay Timer1 (P26E) when they are triggered. If the panel is not disarmed before the expiry of the Entry Delay Timer1, the alarm outputs will be activated.

P41E [Zone No]E *turns the options ON*

P41E [Zone No]E ON: The zone is an Entry Delay1 zone
To deselect the option, select a different zone type in the DELAY GROUP.

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P42E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
2E ON: Zone 2 is a Handover zone

NOTES:
- When a zone is selected for this type, it is automatically deselected from any other zone type in the DELAY GROUP

HANDOVER ZONES

Handover zones are delayed only if entry is made through an Entry Delay zone first. If a Handover zone is triggered first, the zone behaves as an instant zone. Normally, the "point of entry" zone should be Delay zone, with any other zones in the entry path programmed as Handover zones.

PROGRAMMING SEQUENCE:

P42E [Zone No]E *turns the options ON*

P42E [Zone No]E ON: The zone is a Handover zone
To deselect the option, select a different zone type in the DELAY GROUP.

P43E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No zones have Entry Delay2

NOTES:
- When a zone is selected for this type, it is automatically deselected from any other zone type in the DELAY GROUP

ENTRY DELAY2 ZONES

When an Entry Delay2 zone is triggered, it has entry delay as set by the Entry Delay Time2 (P27E).

PROGRAMMING SEQUENCE:

P43E [Zone No]E *turns the options ON*

P43E [Zone No]E ON: The zone is an Entry Delay2 zone
To deselect the option, select a different zone type in the DELAY GROUP.

P44E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all ON: All zones are Lockout zones

NOTES:
- The SIREN output always locks out
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON
- RELATED OPTIONS:
  P60E 4E Tamper Reset Lockout

RESET LOCKOUT ZONES

All 16 zones and tamper input can be programmed to Lockout, i.e. cause the RESET OUTPUT to sound only once whilst the panel is armed.

The RESET OUTPUT is then locked out for that alarmed zone until entering a valid code has reset the panel.

PROGRAMMING SEQUENCE:

P44E [Zone No]E *toggles the options ON and OFF*

P44E [Zone No]E OFF: The zone is not a Lockout zone
P44E [Zone No]E ON: The zone is a Lockout zone

P45E, P46E

AREA PARTITIONING

See page 20

P47E - P50E

ASSIGNING USER CODES TO AREAS

See page 21

P51E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No Monitor zones

NOTES:
- RELATED OPTIONS:
  P63E Monitor Mode output mapping
  P64E 1E 2 second Monitor Mode alarm
  P64E 3E Monitor zones have Entry Delay2

MONITOR ZONES

Monitor zones allow you to Arm selected zones while others are ignored. Typically used for perimeter zones such as windows and doors while you are at home. Example: Upstairs zones are Disarmed while downstairs zones are Armed in Monitor mode.

PROGRAMMING SEQUENCE:

P51E [Zone No]E *toggles the options ON and OFF*

P51E [Zone No]E OFF: The zone is not a Monitor zone
P51E [Zone No]E ON: The zone is a Monitor zone

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P52E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No 24hr zones

NOTES:
- The Tamper input is always a 24hr zone
- For silent 24hr zones, deselect the zone/s from options P54E-P57E (Reset, Strobe, Sonalert & Siren)
- To change a 24hr zone to any other zone type, the zone must also be re-assigned to an AREA (P45E or P46E).
- 24hr zones are independent of Area operation. All other zone types must be assigned to at least one Area to become active.

24hr ZONES

24hr Zones operate at all times regardless of the mode of panel operation, i.e. Armed, Disarmed or Monitor. When alarmed, these zones will activate assigned outputs immediately. To reset those alarms a valid user code must be entered.

Selecting a zone as 24hr will override any other zone type setting such as Instant, Delayed or Handover.

PROGRAMMING SEQUENCE:

P52E [Zone No]E *toggles the options ON and OFF*

P52E [Zone No]E OFF: The zone is not a 24hr zone
P52E [Zone No]E ON: The zone is a 24hr zone

P53E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No Day zones

NOTES:
- RELATED OPTIONS:
  P63E 5E-8E Day zone output mapping
  P64E 2E Brief Day Mode alarm
- TYPICAL USES: Instant alert when a delivery door is opened, doorway alert for a shop.

DAY ZONES

Day Zones operate when the panel is fully disarmed, i.e. when Area 1, Area 2 and Monitor are all off. When alarmed, these zones will activate the assigned outputs instantly.

The outputs mapped to the Day Zone will turn on while the zone is unsealed. Turn P64E 2E on, to limit Day Zone alarms to 2 seconds.

PROGRAMMING SEQUENCE:

P53E [Zone No]E *toggles the options ON and OFF*

P53E [Zone No]E OFF: The zone is not a Day zone
P53E [Zone No]E ON: The zone is a Day zone

TEMPORARY DAY ZONES

D16 Version 4.6 introduces the 'Temporary Day Zone' feature which allows easy and flexible Day Zone selection and operation.

While remaining in normal operating mode, the user can add and remove 'Temporary Day Zones' and enable/disable day zone operation using simple key strokes.

TO ENABLE TEMPORARY DAY ZONES

To enable Temporary Day Zone selection and operation, the Brief Day Alarm feature (installer option P64E 2E) must be ON. If P64E 2E is OFF, the Temporary Day Zone feature will be unavailable but Permanent Day Zones will still operate and will sound the programmed output while the zone is unsealed.

P64E 2E is OFF by default.

USER COMMANDS (In normal Operating Mode).

(P) + (E)

Selection Mode. Enter **P** followed by **E** when in operating mode to enter Temporary Day Zone selection mode.

[Zone No.] + (E)

Zone Selection. To select or deselect zones to be Temporary Day Zones. The selected zones are indicated by the corresponding zone number.

Permanent Day Zones, (set by installer option P53E), are not displayed in selection mode. Permanent Day Zones can be selected as Temporary Day Zones but this has no effect as those zones are already day zones.

(E)

Saves changes and returns to normal operating mode.

(0) + (E)

Enables and Disables Day Mode. This enables/disables both Temporary and Permanent Day Zones.

When Day Mode is enabled, any unsealed day zone will sound the programmed output for 2 seconds. When Day Mode is disabled, an unsealed day zone will simply be indicated on the keypad as an unsealed zone. (Note: The keypad does not indicate if Day Mode is enabled or disabled).

AUX 2 OPTION

When the Temporary Day Zone feature is enabled, the installer option P63E 6E selects Aux 2 output instead of the strobe output. This allows a remote warning device such as a buzzer to be connected for day zone warning. This may be needed if an additional audible day zone warning is needed, although the keypad sonalert, (P63E 7E), is more than adequate in most cases.

RELATED OPTIONS

P64E 2E, Brief Day Alarm. Turn this option on to enable Temporary Day Zones. Factory default = OFF.

P63E 5E, Day Mode to Reset output.

P63E 6E, Day Mode to Strobe output.

If P64E 2E is ON, then this option sends day alarms to the AUX 2 output.

P63E 7E, Day Mode to Sonalert.

P63E 8E, Day Mode to Siren output.

P53E, Permanent Day Zone selection.

Temporary Day Zone selections will be lost if the panel is powered down or reset, but are not affected by arming/disarming or entering program mode.

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AREA PARTITIONING

DEFINITION

Area Partitioning allows the 16 zones to be split into two partitions; Area1 and Area2.

The panel then effectively operates as two separate systems sharing only the siren outputs and dialler.

USER CODE ASSIGNMENT

A User Code assigned to an Area can Arm and Disarm only that Area. User Codes assigned to both Areas will operate both Areas simultaneously.

COMMON AREA ZONES

Zones assigned to both Areas are armed only when Area1 and Area2 are both armed. This allows the Common Area zone/s to be shared by both Areas.

For example, Office A and Office B operate as separate areas but the entrance foyer used by both offices is assigned to *both* areas meaning it will automatically Arm when both Areas have Armed. The Common Area then automatically disarms when either Area1 or Area2 Disarms.

OPERATION

Arming and Disarming is carried out as normal from a single keypad or separate keypads installed in both areas or by Radio Key.

Area operation only applies to zones when they are in the armed state. This means that Day, 24hr and Monitor zones are independent of the area operations.

Note: Area partitioning is in addition to Monitor Mode. Any zone may be allocated to any area.

		Zones															
OPTION No	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P45E	Area 1 zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P46E	Area 2 zones																

ON = Factory default setting

P45E, P46E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No zones assigned to Area 2.

NOTES:
- For options P45E and P46E, **[Zone No] E** toggles the selection ON and OFF.
- Zones assigned to BOTH areas become Common zones.
- If no Area operation is required, assign all zones to Area 1. (This is also the factory default).

ASSIGNING ZONES TO AREAS

Assign (or remove) zones that will operate when Area 2 is armed.

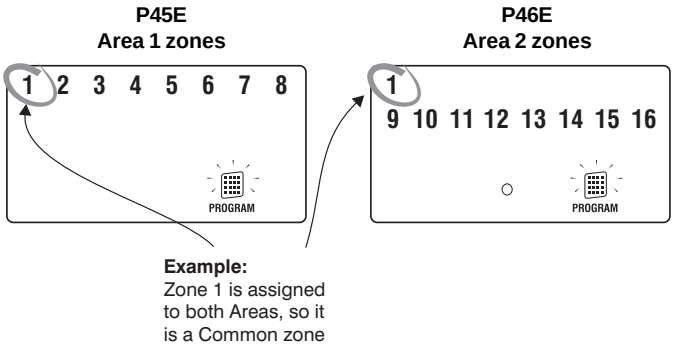
PROGRAMMING SEQUENCE:

P45E [Zone No]E *toggles the options ON and OFF for Area1*
P45E [Zone No]E OFF: The zone is not in Area1
P45E [Zone No]E ON: The zone is in Area1

P46E [Zone No]E *toggles the options ON and OFF for Area2*
P46E [Zone No]E OFF: The zone is not in Area2
P46E [Zone No]E ON: The zone is in Area2

EXAMPLE: To program zones 1-8 for Area 1 and zones 1 & 9-16 for Area 2. In this example, we have assigned zone 1 to both areas, so it becomes a Common zone.

P45E Use the **[Zone No] E** sequence to turn ON only zones 1-8.
P46E Use the **[Zone No] E** sequence to turn ON zone 1 and zones 9-16.



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OPTION No	DESCRIPTION	1E User Code 1	2E User Code 2	3E User Code 3	4E User Code 4	5E User Code 5	6E User Code 6	7E User Code 7	8E User Code 8
P47E	Codes 1-8 to AREA1	ON	ON	ON	ON	ON	ON	ON	ON
P49E	Codes 1-8 to AREA2	ON							

OPTION No	DESCRIPTION	1E User Code 9	2E User Code 10	3E User Code 11	4E User Code 12	5E User Code 13	6E User Code 14	7E User Code 15	
P48E	Codes 9-15 to AREA1	ON	ON	ON	ON	ON	ON	ON	
P50E	Codes 9-15 to AREA2								

ON = Factory default setting.

P47E, P48E

DESCRIPTION:
Area 1 User Codes

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
All User Codes assigned to Area 1

P49E, P50E

DESCRIPTION:
Area 2 User Codes

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
User Code 1 (Master Code) assigned to Area 2.

NOTES:

- User Codes can be assigned to either a single Area or to both Areas.
- If a User Code is assigned to NO Areas, the code is effectively disabled and will not operate the panel.
- To make a User Code arm or disarm just one Area, assign that code only to the required Area.
- Assigning User Codes to Areas has no effect unless zones are also assigned to Areas.
- For this option **[Zone No] E** toggles the selection ON and OFF.

ASSIGNING USER CODES TO AREAS

Assign (or remove) User Codes to Areas.

PROGRAMMING SEQUENCE:

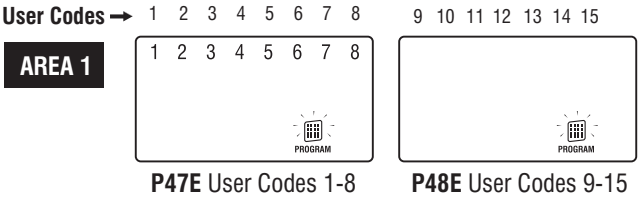
P47E 1E-8E *toggles the options ON and OFF*
Assigns User Codes 1-8 to **AREA1**

P48E 1E-7E *toggles the options ON and OFF*
Assigns User Codes 9-15 to **AREA1**

P49E 1E-8E *toggles the options ON and OFF*
Assigns User Codes 1-8 to **AREA2**

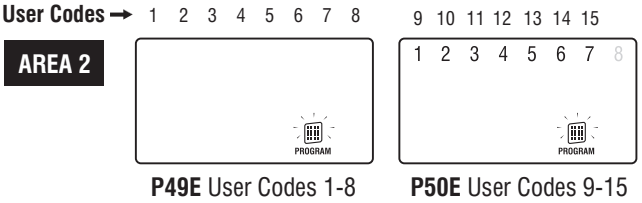
P50E 1E-7E *toggles the options ON and OFF*
Assigns User Codes 9-15 to **AREA2**

EXAMPLE:
To assign User Codes 1-8 to AREA1 and User Codes 9-15 to AREA2.
P47E turn ON lights 1-8
P48E turn OFF lights 1-7
P49E turn OFF lights 1-8
P50E turn ON lights 1-7



P47E User Codes 1-8 **P48E** User Codes 9-15

EXAMPLE:
User codes 1-8 are assigned to AREA 1.



P49E User Codes 1-8 **P50E** User Codes 9-15

EXAMPLE:
User codes 9-15 are assigned to AREA 2.

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ZONE TO OUTPUT MAPPING

When a zone alarms, it can turn on any or all of the following 6 outputs: Sonalert, Strobe, Siren, Reset, AUX1, AUX2.

The programming is selected with options P54E - P59E. Simply set the zone number to the output to select it. The zone LED will indicate if the zone is selected.

The Tamper Input and the Keypad Panic can be programmed to turn on the Reset, Strobe, Sonalert and Siren by using option P61E.

NOTE: Zone To Output Mapping applies to zones when the panel is in the Armed or 24hr state.

For MONITOR and DAY mode Output Mapping - see Option P63E 1E-8E, page 28

ZONE TO OUTPUTS MAPPING

OPTION No	DESCRIPTION	Zones 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P54E	Reset zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P55E	Strobe zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P56E	Sonalert zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P57E	Siren zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P58E	Aux1 zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P59E	Aux2 zones	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

ON = Factory default setting

P54E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all ON: All zones trigger Reset output

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

RESET OUTPUT ZONES

Selects the zones to trigger the Reset output.

PROGRAMMING SEQUENCE:

P54E [Zone No]E *toggles the options ON and OFF*

P54E [Zone No]E OFF: The zone will not trigger the Reset output
P54E [Zone No]E ON: The zone will trigger the Reset output

P55E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all ON: All zones trigger Strobe output

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

STROBE OUTPUT ZONES

Selects the zones to trigger the Strobe output.

PROGRAMMING SEQUENCE:

P55E [Zone No]E *toggles the options ON and OFF*

P55E [Zone No]E OFF: The zone will not trigger the Strobe output
P55E [Zone No]E ON: The zone will trigger the Strobe output

P56E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all ON: All zones trigger Keypad Sonalert

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

KEYPAD SONALERT ZONES

Selects the zones to trigger the Keypad Sonalert (beeper).

PROGRAMMING SEQUENCE:

P56E [Zone No]E *toggles the options ON and OFF*

P56E [Zone No]E OFF: The zone will not trigger the Keypad Sonalert
P56E [Zone No]E ON: The zone will trigger the Keypad Sonalert

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P57E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all ON: All zones trigger Siren output

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

SIREN OUTPUT ZONES

Selects the zones to trigger the Siren output.

PROGRAMMING SEQUENCE:

P57E [Zone No]E *toggles the options ON and OFF*

P57E [Zone No]E OFF: The zone will not trigger the Siren output
P57E [Zone No]E ON: The zone will trigger the Siren output

P58E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No zones trigger AUX1

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

AUX1 OUTPUT ZONES

Selects the zones to trigger the AUX1 output. AUX1 output is Pin1 on the J3 header on the main board.

Once turned on by a zone alarm, the output will remain on until the panel is reset/disarmed.

PROGRAMMING SEQUENCE:

P58E [Zone No]E *toggles the options ON and OFF*

P58E [Zone No]E OFF: The zone will not trigger the AUX1 output
P58E [Zone No]E ON: The zone will trigger the AUX1 output

P59E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No zones trigger AUX2

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

AUX2 OUTPUT ZONES

Selects the zones to trigger the AUX2 output. AUX2 output is Pin2 on the J3 header on the main board.

Once turned on by a zone alarm, the output will remain on until the panel is reset/disarmed.

PROGRAMMING SEQUENCE:

P59E [Zone No]E *toggles the options ON and OFF*

P59E [Zone No]E OFF: The zone will not trigger the AUX2 output
P59E [Zone No]E ON: The zone will trigger the AUX2 output

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OPTION No	DESCRIPTION	1E Entry beeps	2E Keysw Monitor/Disarm	3E Keysw/Arm/Disarm	4E Tamper siren lockout	5E Duress to Reset output	6E Auo Exclude zones	7E Auto KP display off	8E Delay AREA1-2 outputs
P60E	Various options	ON			ON		ON		

ON = Factory default setting.

P60E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
Entry Beeps ON

NOTES:

ENTRY BEEPS

The sonalert will beep during Entry Delay.

PROGRAMMING SEQUENCE:

P60E 1E *toggles the option ON and OFF*

P60E 1E OFF: Entry Beeps OFF
P60E 1E ON: Entry Beeps ON

P60E 2E, 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No keyswitch enabled

NOTES:

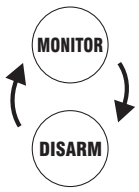
- The keyswitch always Arms Area1 only.
- The keyswitch always Disarms Area1 *and* Area2.
- Momentary short circuit across resistor to toggle panel modes.
- Open circuit resistor to trigger keyswitch panic.
- Multiple keyswitches can be used. Wire in parallel.
- **Zone Split.** If Zone 8 is converted to a Keyswitch Input, then a 2K2 monitoring resistor is always used and Zone Splitting is not available on the Z8 input (no Zone8 or Zone16). Zone8 and Zone16 are still available as RADIO ZONES however.

See: Zone Split, page 35

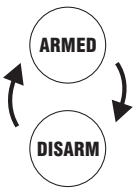
KEYSWITCH OPERATION

An externally fitted, normally open momentary keyswitch can be used to Arm, Disarm or change the D16 to Monitor mode.

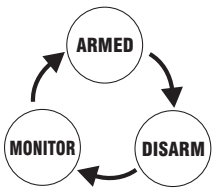
The keyswitch is wired to zone 8 (zone 8 is then no longer available as a normal alarm input, but IS still available for use as a Radio Zone).



P60E 2E is ON



P60E 3E is ON

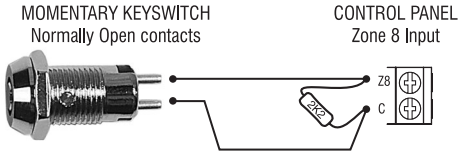


P60E 2E is ON
P60E 3E is ON

PROGRAMMING SEQUENCE:

P60E 2E or 3E *toggles the option ON and OFF*

P60E 2E & 3E OFF: No keyswitch operation. Zone 8 is a normal alarm input.
P60E 2E ON: Keyswitch cycles between Monitor and Disarm.
P60E 3E ON: Keyswitch cycles between Arm and Disarm.
P60E 2E & 3E ON: Keyswitch cycles between Arm, Monitor and Disarm.



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P60E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Tamper Reset Lockout enabled

NOTES:
RELATED OPTIONS:
P44E Lockout zones

TAMPER ALARM LOCKOUT

This option programs the Tamper input to Lockout, i.e. cause the Siren & Reset outputs to sound only once whilst the panel is armed.

PROGRAMMING SEQUENCE:

P60E 4E *toggles the option ON and OFF*

P60E 4E OFF: Tamper Reset Lockout disabled
P60E 4E ON: Tamper Reset Lockout enabled

P60E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Reset output on Duress alarm

NOTES:
• To Disarm with Duress, add any of the digits 5,6,8 or 9 in front of the User Code when disarming.

DURESS TO RESET OUTPUT

Keypad Duress is normally a silent alarm. This option makes the Duress alarm trigger the Reset output.

PROGRAMMING SEQUENCE:

P60E 5E *toggles the option ON and OFF*

P60E 5E OFF: No Reset output on Duress alarm
P60E 5E ON: Duress alarm triggers Reset output

P60E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Auto Exclude enabled

NOTES:
• RELATED OPTIONS:
P62E 7E Siren burst on Auto Exclude

AUTO EXCLUDE ZONES

If a zone is unsealed at the end of Exit Time the panel can either Exclude (ignore) that zone or immediately alarm.

The panel will give a 2 second Siren burst at the end of Exit Time to indicate that the panel is armed with a zone/s Auto Excluded. The 2 sec Siren burst can be disabled by option P62E 7E.

PROGRAMMING SEQUENCE:

P60E 6E *toggles the option ON and OFF*

P60E 6E OFF: Auto Exclude disabled (instant alarm if unsealed at end of Exit Time)
P60E 6E ON: Auto Exclude enabled (zone is excluded if unsealed at end of Exit Time)

P60E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Display is always ON

NOTES:
• On the LCD keypad, the display and display backlighting will turn off but the keys backlighting will remain on. The keypad flap can be closed to reduce stray light from the keys.

DISABLE THE DISPLAY

The LED indicators on the keypad can be programmed to blank after 4 minutes of no keypad use. Any action that causes a beep will restore the display (Use the (E) button preferably).

PROGRAMMING SEQUENCE:

P60E 7E *toggles the option ON and OFF*

P60E 7E OFF: Display is always on
P60E 7E ON: Display will blank after 4 minutes

P60E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: ARM1 & ARM2 outputs are instant

NOTES:
• See diagram on page 6

DELAY ARM1 & ARM2 OUTPUTS

The output ARM1 turns on when Area 1 is armed. The output ARM2 turns on when Area 2 is armed. These outputs can be programmed to turn on instantly or at the end of Exit Time

ARM1 & ARM2 output s are Pins 3 & 4 on the J3 header on the main board.

PROGRAMMING SEQUENCE:

P60E 8E *toggles the option ON and OFF*

P60E 8E OFF: ARM1 & ARM2 outputs turn on instantly
P60E 8E ON: ARM1 & ARM2 outputs turn on at end of Exit Time

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OPTION No	DESCRIPTION	1E Tamper to Reset output	2E Tamper to Strobe output	3E Tamper to Sonalert	4E Tamper to Siren output	5E KP Panic to Reset output	6E KP Panic to Strobe output	7E KP Panic to Sonalert	8E KP Panic to Siren output
P61E	Tamper & Panic alarms mapping	ON	ON	ON	ON	ON	ON	ON	ON

ON = Factory default setting.

P61E 1E-4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
1E-4E, ON: Tamper alarm triggers all outputs

NOTES:
- A Tamper Alarm can be caused by the TAMP input or by removing the the J1 link.

TAMPER ALARM / OUTPUT MAPPING

This option selects which outputs will trigger when a Tamper Alarm occurs.

PROGRAMMING SEQUENCE:

P61E 1E-4E *toggles the options ON and OFF*

P61E 1E: Tamper Alarm to Reset output
P61E 2E: Tamper Alarm to Strobe output
P61E 3E: Tamper Alarm to Keypad Sonalert output
P61E 4E: Tamper Alarm to Siren output

P61E 5E-8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
5E-8E, ON: Panic alarm triggers all outputs

NOTES:
- A Keypad Panic Alarm can be caused by the PANIC keys on the keypad (* E or ** together, depending on Option P64E6E).

KEYPAD PANIC ALARM / OUTPUT MAPPING

This option selects which outputs will trigger when a Keypad Panic alarm occurs.

PROGRAMMING SEQUENCE:

P61E 5E-8E *toggles the options ON and OFF*

P61E 5E: Keypad Panic Alarm to Reset output
P61E 6E: Keypad Panic Alarm to Strobe output
P61E 7E: Keypad Panic Alarm to Keypad Sonalert output
P61E 8E: Keypad Panic Alarm to Siren output

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OPTION No	DESCRIPTION	1E Shortcut Memory Display	2E Shortcut Zone Exclude	3E Shortcut Monitor Mode	4E Shortcut Keypad Panic	5E Shortcut Area1 Arming	6E Shortcut Area2 Arming	7E 2 sec Siren Auto Exclude	8E Exit Time x10
P62E	Operation Shortcuts, etc	ON	ON	ON		ON		ON	

ON = Factory default setting.

P62E 1E-6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
1E, ON: Memory Display shortcut enabled
2E, ON: Zone Exclude shortcut enabled
3E, ON: Monitor Mode shortcut enabled
4E, OFF: Keypad Panic disabled
5E, ON: Area1 Arming shortcut enabled
6E, OFF: Area2 Arming shortcut disabled

NOTES:
- A Tamper Alarm can be caused by the TAMP input or the J1 link.
- Allocate a User Code to Area2 before programming Area2 shortcut arming. If Area 2 is shortcut armed then it will always remain armed. This will bar entry into program mode until Area 2 is disarmed.

SYSTEM OPERATION SHORTCUTS

Some keypad operations can be programmed to operate with or without a User Code.

PROGRAMMING SEQUENCE:

P62E 1E-6E *toggles the options ON and OFF*

P62E 1E Memory Display shortcut
P62E 2E Zone Exclude shortcut
P62E 3E Monitor Mode shortcut
P62E 4E Keypad Panic shortcut
P62E 5E Area1 Arming shortcut
P62E 6E Area2 Arming shortcut

OPERATING EXAMPLES:

Arming without shortcut: ARM **[User Code]** E

Arming with shortcut: ARM E

Keypad Panic without shortcut: * **[User Code]** E

Keypad Panic with shortcut: * E

P62E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Siren burst on Auto Exclude enabled

NOTES:
- RELATED OPTIONS:
  P60E 6E Auto Exclude zones

SIREN BURST ON AUTO EXCLUDE

This option allows the disabling of the 2 second siren burst at end of Exit Time which indicates a zone/s has been Auto Excluded.

PROGRAMMING SEQUENCE:

P62E 7E *toggles the option ON and OFF*

P62E 7E OFF: Siren burst on Auto Exclude disabled
P62E 7E ON: Siren burst on Auto Exclude enabled

P62E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Exit Time x10 disabled

NOTES:
- RELATED OPTIONS:
  P28E Exit Time

EXIT TIME X10

This option multiplies the normal exit time by a factor of 10.

PROGRAMMING SEQUENCE:

P62E 8E *toggles the option ON and OFF*

P62E 8E OFF: Exit Time is the time set by P28E
P62E 8E ON: Exit Time is multiplied by 10

EXAMPLE: If P28E = 22 seconds then if P62E 8E is ON, the exit time is 22 x 10 = 220 seconds.

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OPTION No	DESCRIPTION	1E Monitor to Reset output	2E Monitor to Strobe output	3E Monitor to Sonalert output	4E Monitor to Siren output	5E Day Mode to Reset output	6E Day Mode to Strobe output	7E Day Mode to Sonalert output	8E Day Mode to Siren output
P63E	Monitor & Day mode output mapping					ON	ON		

ON = Factory default setting.

P63E 1E-4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
1E-4E OFF: No Monitor Mode outputs

NOTES:
- RELATED OPTIONS:
  P64E 1E 2second Monitor alarm

MONITOR MODE OUTPUT MAPPING

This option selects which outputs are triggered by alarms in Monitor Mode.

PROGRAMMING SEQUENCE:

P63E 1E-4E *toggles the options ON and OFF*

P63E 1E: Monitor Mode to Reset output
P63E 2E: Monitor Mode to Strobe output
P63E 3E: Monitor Mode to Keypad Sonalert output
P63E 4E: Monitor Mode to Siren output

P63E 5E-8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
5E, 6E ON
7E, 8E OFF

NOTES:
- RELATED OPTIONS:
  P64E 2E 2second Day alarm

DAY MODE OUTPUT MAPPING

This option selects which outputs are triggered by alarms in Day Mode.

PROGRAMMING SEQUENCE:

P63E 5E-8E *toggles the options ON and OFF*

P63E 5E: Day Mode to Reset output
P63E 6E: Day Mode to Strobe output, (If Brief Day Alarm is enabled, (P64E 2E), then this option sends day alarms to the AUX2 output).
P63E 7E: Day Mode to Keypad Sonalert output
P63E 8E: Day Mode to Siren output

MONITOR Mode and DAY Mode Output Mapping is an extra feature released with the D16.

Note that MONITOR and DAY zones do not automatically assume the outputs assigned by Options P54E-P59E. Those options only apply to zones when the panel is in the ARMED state.

Options P63E 1E-8E allow different outputs to be triggered when the panel is in MONITOR and DAY modes.

**For ZONE TO OUTPUT MAPPING (Armed & 24hr states)
- see Options P54E - P59E, page 22**

Technical Manuals Online! - http://www.tech-man.com

OPTION No	DESCRIPTION	1E 2 second Monitor Alarm	2E 2 second Day Alarm	3E Monitor zones Entry2	4E Radio Key chirp & flash	5E 50Hz mains frequency	6E Double key Keypad Panic	7E Keypad Fire Alarm	8E Keypad Medical Alarm
P64E	Miscellaneous options		ON	ON		ON	ON		

ON = Factory default setting.

P64E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Brief Monitor Alarm disabled

- RELATED OPTIONS:
  P51E Set Monitor zones
  P63E 1E-4E Monitor Mode output mapping

BRIEF MONITOR MODE ALARM

Alarms in Monitor Mode can either activate the programmed outputs for Siren Time duration (P29E) or they can activate the outputs for 2 seconds only.

PROGRAMMING SEQUENCE:

P64E 1E *toggles the option ON and OFF*

P64E 1E OFF: Brief Monitor Alarm disabled. Monitor Mode alarms have normal time as set by P29E
P64E 1E ON: Brief Monitor Alarm enabled. Monitor Mode alarms are ON for 2 seconds only

P64E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Brief Day Alarm disabled

NOTES:

- RELATED OPTIONS:
  P53E Assign Day zones
  P63E 5E-8E Day Mode output mapping

BRIEF DAY ALARM

Alarms in Day Mode will activate the programmed outputs while the zone is unsealed or they can activate the outputs for 2 seconds only.

This option, when on, also enables the Temporary Day Zone feature. See page 19.

PROGRAMMING SEQUENCE:

P64E 2E *toggles the option ON and OFF*

P64E 2E OFF: Brief Day Alarm disabled. Day alarm outputs are ON while the zone is unsealed
P64E 2E ON: Brief Day Alarm Enabled. Day alarm outputs are ON for 2 seconds only

P64E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Monitor zones all have Entry Delay2

NOTES:

- RELATED OPTIONS:
  P27E Entry Delay Time 2
  P51E Assign Monitor zones
  P63E 1E-4E Monitor Mode output mapping

MONITOR ZONES ENTRY DELAY 2

Monitor zones can either have the delay types set by options P40E-P43E or they can all be assigned to have Entry Delay 2. This allows all Monitor zones to be programmed with the same entry delay time.

PROGRAMMING SEQUENCE:

P64E 3E *toggles the option ON and OFF*

P64E 3E OFF: Monitor zones behave as programmed by P40E-P43E
P64E 3E ON: Monitor zones all have Entry Delay2

P64E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No chirps

NOTES:

- RELATED OPTIONS:
  P68E 8E Quiet Chirps

ARM/DISARM CHIRPS

If this option is selected the Siren and Strobe Outputs will "Chirp" when the panel is Armed and Disarmed with the Keyswitch or Radio Keys.

The panel will make 1 Chirp on Arming, and 3 Chirps on Disarming.

PROGRAMMING SEQUENCE:

P64E 4E *toggles the option ON and OFF*

P64E 4E OFF: No Arm/Disarm chirps
P64E 4E ON: Siren & Strobe outputs will chirp on arm/disarm

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P64E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: 50Hz mains frequency

NOTES:

50Hz MAINS FREQUENCY

Selects either 50Hz or 60Hz mains power frequency operation. Leave the factory default for use in Australia and New Zealand. Users in North America should select 60Hz mains frequency.

Required for the accurate timing of dialler test reports (if programmed). It has no effect on local or other dialler operations.

PROGRAMMING SEQUENCE:

P64E 5E *toggles the option ON and OFF*

P64E 5E OFF: 60Hz mains frequency
P64E 5E ON: 50Hz mains frequency

P64E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Double key Keypad Panic enabled

NOTES:
- RELATED OPTIONS:
  P62E 4E Shortcut Keypad Panic
- The Ness LCD keypad has two buttons labelled (*)

DOUBLE KEY KEYPAD PANIC

This option allows the Keypad Panic alarm to be triggered by pressing both (*) Panic buttons together.

NOTE: (*) **[User Code]** (E) always triggers Keypad Panic

PROGRAMMING SEQUENCE:

P64E 6E *toggles the option ON and OFF*

P64E 6E OFF: No double key Keypad Panic
P64E 6E ON: Double key Keypad Panic enabled

P64E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Keypad Fire Alarm

NOTES:
- RELATED OPTIONS:
  P68E 6E Fire Siren sound

KEYPAD FIRE ALARM

This option enables the Keypad Fire Alarm. Pressing (3) and then (E) activates the dialler and reports a Fire Alarm and triggers the siren. The “Fire Alarm” siren sound is different to the normal alarm siren sound.

PROGRAMMING SEQUENCE:

P64E 7E *toggles the option ON and OFF*

P64E 7E OFF: No Keypad Fire Alarm
P64E 7E ON: Keypad Fire Alarm enabled

P64E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Keypad Medical Alarm

NOTES:
- RELATED OPTIONS:

KEYPAD MEDICAL ALARM

This option enables the Keypad Medical Alarm. Pressing (2) and then (E) activates the dialler and reports a Medical Alarm.

PROGRAMMING SEQUENCE:

P64E 8E *toggles the option ON and OFF*

P64E 8E OFF: No Keypad Medical Alarm
P64E 8E ON: Keypad Medical Alarm enabled

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OPTION No	DESCRIPTION	Zones 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P65E	Supervised Radio zones																

ON = Factory default setting

P65E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
all OFF: No Radio Supervision zones

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON
- RELATED OPTIONS:
  P66E 1E-6E Radio Supervision Alerts
  P67E Radio Supervision Time
  P101E-P116E Programming Radio Devices

SUPERVISED RADIO ZONES

This option assigns zones that will operate as Radio Supervised types.

Supervised signals failure is reported (as per the P66E output options) when no signal is received from a Radio Supervision Zone for the Supervision Time P67E.

Radio Supervision for any zone is not enabled unless a Radio PIR is assigned to the zone, (P101E-P116E).

PROGRAMMING SEQUENCE:

P65E 1E-16E *toggles the options ON and OFF*

P65E [Zone No]E OFF: The zone is not a Supervised Radio zone
P65E [Zone No]E ON: The zone is a Supervised Radio zone

P66E 1E-6E

RADIO SUPERVISION ALERTS, SUPERVISION TIME SPEEDUP

See pages 32-33

P67E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
24hrs

NOTES:
- A setting of less than 3 hours is not recommended.
- The Supervision timer is reset on exit from Installer Program Mode, on Arm or Disarm and on reception of the Supervision signal from the particular Radio PIR.
- The Supervision signal from each Supervised Radio PIR is individually timed.
- RELATED OPTIONS:
  P65E Radio Supervision Zones
  P66E 1E-6E Radio Supervision Alerts
  P66E 7E-8E Supervision Time Speed-up

See Page 57 for Radio Device programming

SUPERVISION TIME

The SUPERVISION TIME is the time allowed between radio transmissions received by the D16 from any Supervised Ness Radio PIR (100-663).

The SUPERVISION TIME setting is from 01 to 24 hours.

PROGRAMMING SEQUENCE:

P67E *existing time is displayed* **[ENTER NEW TIME] E** *new time is displayed*

EXAMPLE: To program SUPERVISION TIME to be 4 hours:
P67E 04E

RADIO SUPERVISION

The purpose of Radio Supervision is to verify the correct operation of Ness Radio PIRs. The Supervision signal from the Radio PIR tells the panel that the device has not been removed from radio range and is in working order.

Non-SUPERVISION Radio PIRs can also be programmed and used with the D16 SUPERVISION TIMERS.

A non-SUPERVISION enabled Radio PIR will transmit signals to the D16 only when it has detected an event. Obviously, there is no guaranteed signal period.

In either case, when the allowed time limit is exceeded then a WARNING is first given (if programmed by P66E 3E), and then after 1 minute, the programmed RADIO SUPERVISION ALERTS are generated by the D16.

NOTE: Manually Excluding a Supervised Zone will also disable Radio Supervision for that zone.

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OPTION No	DESCRIPTION	1E Supervision RESET output	2E Supervision STROBE output	3E Supervision SONALERT output	4E Supervision SIREN output	5E Supervision AUX1 output	6E Supervision AUX2 output	7E Supervision speedup x6	8E Supervision speedup x10
P66E	Radio Supervision Alerts								

ON = Factory default setting.

P66E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision Reset output disabled

NOTES:
- RELATED OPTIONS:
  P65E Supervised Radio Zones

RADIO SUPERVISION ALERTS - **RESET OUTPUT**

Setting this option turns the Reset output ON when a SUPERVISED RADIO alert occurs. The Reset output will remain ON for the duration of the ALARM TIME (Set by Option P29E).

PROGRAMMING SEQUENCE:

P66E 1E *toggles the option ON and OFF*

P66E 1E OFF: Supervision Reset output disabled
P66E 1E ON: Supervision Reset output enabled

P66E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision Strobe output disabled

NOTES:
- RELATED OPTIONS:
  P65E Supervised Radio Zones

RADIO SUPERVISION ALERTS - **STROBE OUTPUT**

Setting this option turns the Strobe output ON when a SUPERVISED RADIO alert occurs. The Strobe output will remain ON until the panel is disarmed.

PROGRAMMING SEQUENCE:

P66E 2E *toggles the option ON and OFF*

P66E 2E OFF: Supervision Strobe output disabled
P66E 2E ON: Supervision Strobe output enabled

P66E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision Keypad Sonalert disabled

NOTES:
- When this option is turned ON, it delays the operation of all other selected Supervision outputs by one minute.
- RELATED OPTIONS:
  P65E Supervised Radio Zones

RADIO SUPERVISION ALERTS - **KEYPAD SONALERT & DELAY ALL SUPERVISION OUTPUTS**

Setting this option turns the Keypad Sonalert ON when a SUPERVISED RADIO alert occurs. The Keypad Sonalert remains ON until *any* keypad key is pressed.

Also, turning this option ON makes all Supervision outputs delayed by one minute.

PROGRAMMING SEQUENCE:

P66E 3E *toggles the option ON and OFF*

P66E 3E OFF: Supervision Keypad Sonalert disabled
AND all Supervision outputs trigger instantly

P66E 3E ON: Supervision Keypad Sonalert enabled
AND all Supervision outputs are delayed by 1 minute

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P66E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision Siren output disabled

NOTES:
- RELATED OPTIONS:
  P65E Supervised Radio Zones

RADIO SUPERVISION ALERTS - **SIREN OUTPUT**

Setting this option turns the Siren output ON when a SUPERVISED RADIO alert occurs. The Siren output will remain ON for the duration of the ALARM TIME (Set by Option P29E).

PROGRAMMING SEQUENCE:

P66E 4E *toggles the option ON and OFF*

P66E 4E OFF: Supervision Siren output disabled
P66E 4E ON: Supervision Siren output enabled

P66E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision AUX1 output disabled

NOTES:
- AUX1 output is Pin1 on the J3 header on the main board
- RELATED OPTIONS: **P65E**

RADIO SUPERVISION ALERTS - **AUX1 OUTPUT**

Setting this option turns the AUX1 output ON when a SUPERVISED RADIO alert occurs.

PROGRAMMING SEQUENCE:

P66E 5E *toggles the option ON and OFF*

P66E 5E OFF: Supervision AUX1 output disabled
P66E 5E ON: Supervision AUX1 output enabled

P66E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision AUX2 output disabled

NOTES:
- AUX2 output is Pin2 on the J3 header on the main board
- RELATED OPTIONS: **P65E**

RADIO SUPERVISION ALERTS - **AUX2 OUTPUT**

Setting this option turns the AUX2 output ON when a SUPERVISED RADIO alert occurs.

PROGRAMMING SEQUENCE:

P66E 6E *toggles the option ON and OFF*

P66E 6E OFF: Supervision AUX2 output disabled
P66E 6E ON: Supervision AUX2 output enabled

P66E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision Time normal

NOTES:
- RELATED OPTIONS:
  P67E Supervision Time
  P66E 8E Supervision Time speedup x10

SUPERVISION TIME SPEEDUP X6

Setting this option speeds up the Supervision Time by 6. For instance if P67E is set to 1 hour (60 minutes), then this option will reduce it to 10 minutes. (i.e., 60 divided by 6).

PROGRAMMING SEQUENCE:

P66E 7E *toggles the option ON and OFF*

P66E 7E OFF: Supervision Time normal as set by P67E
P66E 7E ON: Supervision Time speedup x6

P66E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Supervision Time normal

NOTES:
- RELATED OPTIONS:
  P67E Supervision Time
  P66E 7E Supervision Time speedup x6
- P66E 7E & 8E are normally only used for Supervision testing purposes

SUPERVISION TIME SPEEDUP X10

Setting this option speeds up the Supervision Time by 10. For instance if P67E is set to 1 hour (60 minutes), then this option will reduce it to 6 minutes. (i.e., 60 divided by 10).

PROGRAMMING SEQUENCE:

P66E 8E *toggles the option ON and OFF*

P66E 8E OFF: Supervision Time normal as set by P67E
P66E 8E ON: Supervision Time speedup x10

NOTE: If both P66E 7E and 8E are both ON then the Supervision time is sped up by 60. For instance if P67E is set to 1 hour (60 minutes), then this option will reduce it to 1 minute. (i.e., 60 divided by 60).

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P68E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No zone split

NOTES:
- Zone Split is required when zones 9-16 are used as hardwire zones.
- Zone Split does not have to be enabled to use zones 9-16 as RADIO zones.
- If Zone 8 is converted to a Keyswitch Input, then a 2K2 monitoring resistor is always used and Zone Splitting is not available on the Z8 input (no Zone8, Zone16). Zone8, Zone16 are still available as RADIO ZONES however.

  See: Keyswitch Operation, page 24
- N.O. contacts can be used only on zones 1 to 8.

END OF LINE RESISTOR NOTES:
- NESS supplies 1% tolerance metal film resistors for the end of line termination. These are accurate value resistors and they stay accurate long term.
- Avoid using carbon film or 5% tolerance resistors, especially when zone splitting. Problems may not become evident until some time after the installation, due to resistor aging, moisture or dust build up.
- If a particular zone will not seal, then check the resistance of BOTH the low zone and high zone cabling (i.e. if zone 1 will not seal then also check zone 9 wiring). The resistance checks should be done after removing the cabling from the D16 terminals and separating into their individual wires.
- A 2K2 monitored line should measure between 2100 Ohms minimum and 2400 Ohms maximum.
- A 4K7 monitored line should measure between 4600 Ohms minimum and 4950 Ohms maximum.

INPUT TABLE

INPUT	ZONE	ZONE
1	1	9
2	2	10
3	3	11
4	4	12
5	5	13
6	6	14
7	7	15
8	8	16

ZONE SPLIT

Setting this option ON splits the Zone Inputs 1-8 into pairs of zones so that there are 16 wired zones available.

Zones 1-8 use 2K2 end of line resistors on the Z1-Z8 inputs.

Zones 9-16 use 4K7 end of line resistors on the Z1-Z8 inputs (with Zone 9 connected to the Z1 input etc).

The monitoring resistors must be wired in parallel, making this zone splitting arrangement suitable for Normal Closed (N.C.) detectors.

PROGRAMMING SEQUENCE:

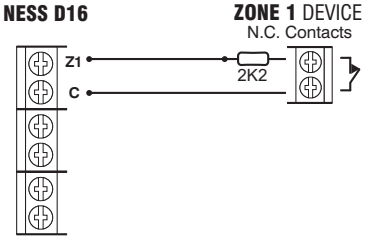
P68E 1E *toggles the option ON and OFF*

P68E 1E OFF: No Zone Split (panel has 8 zone inputs)
P68E 1E ON: Zone split enabled (panel has 16 zone inputs)

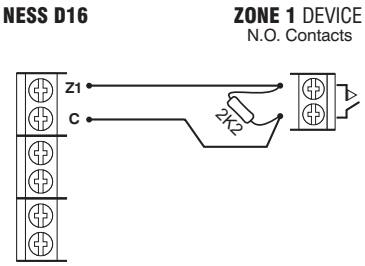
CONNECTION DIAGRAMS

NORMAL (NO ZONE SPLIT)

EXAMPLE 1: Normally Closed Devices

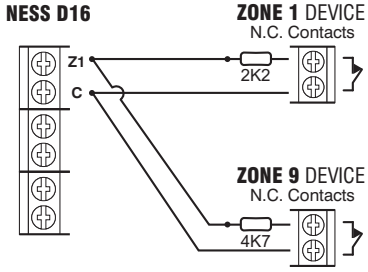


EXAMPLE 2: Normally Open Devices

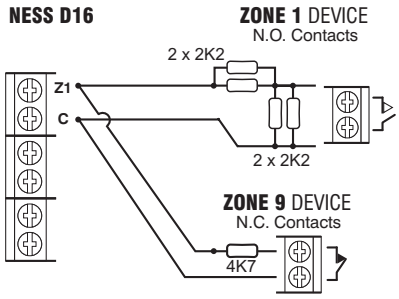


ZONE SPLIT

EXAMPLE 3: Normally Closed Devices



EXAMPLE 4: Normally Open Device Zone 1 ONLY



Normally Open (N.O.) wiring is possible only on Zones 1 to 8. This is done by splitting the 2K2 resistor into 2x 1K1 resistors, joining them in series, and then placing the N.O. contact across one of the 1K1 resistors. (Make a 1K1 resistor by wiring 2x 2K2 resistors in parallel).

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OPTION No	DESCRIPTION	1E Zone split	2E 3K3 zone resistors	3E Radio Key Panic toggles AUX1	4E Radio Key Panic pulses AUX1	5E Radio Key Arming unsealed warning	6E 24hr zone fire siren sound	7E 4th button Radio Key for AUX1	8E Quiet chirps on Arm/Disarm
P68E	Miscellaneous options								

ON = Factory default setting.

P68E 1E

ZONE SPLIT

See page 35

P68E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No 3K3 zone resistors

NOTES:
- The 3K3 zone resistor option is useful when installing the panel in a site pre-wired with 3K3 resistors
- If Zone 8 is converted to a keyswitch input then a 2K2 monitoring resistor is always used

3K3 ZONE RESISTORS

Setting this option ON changes the Zones 1 – 8 monitoring resistor from 2K2 to 3K3. (External Tamper input always uses a 2K2 resistor).

This option has no effect if Zone splitting has been selected with the P68E 1E option.

PROGRAMMING SEQUENCE:

P68E 2E *toggles the option ON and OFF*

P68E 2E OFF: 3K3 zone resistors disabled
P68E 2E ON: 3K3 zone resistors enabled

P68E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Radio Key Panic to AUX1 disabled

NOTES:
- This option is useful for triggering external devices using Radio Key's Panic button. E.g., lighting, garage doors
- When this option is selected ON, the Radio Key Panic function is disabled.

See: **TABLE, RADIO KEY TO AUX1**

RADIO KEY PANIC TOGGLES AUX1

Setting this option ON changes the action of the Radio Key Panic button so that the AUX1 output is toggled ON and OFF. (Each press on Panic toggles the state of AUX1 between ON and OFF).

If an RK4 radio key is used then this option can be used with the AUX button instead of the Panic button (using P68E 7E, 8E). This then allows the Panic key to still activate Panic reports.

PROGRAMMING SEQUENCE:

P68E 3E *toggles the option ON and OFF*

P68E 3E OFF: Radio Key Panic triggers control panel Panic
P68E 3E ON: Radio Key Panic toggles AUX1

P68E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Radio Key Panic to AUX1 disabled

NOTES:
- When this option is selected ON, the Radio Key Panic function is disabled.
- If P68E 3E and 4E are both selected ON, then 4E has priority.

See: **TABLE, RADIO KEY TO AUX1**

RADIO KEY PANIC PULSES AUX1

Setting this option ON changes the action of the Radio Key Panic button so that the AUX1 output is pulsed ON for 2 seconds. (That is; momentary ON for 2sec).

If an RK4 radio key is used then this option can be used with the AUX button instead of the Panic key (using P68E 7E). This then allows the Panic key to still activate Panic reports.

PROGRAMMING SEQUENCE:

P68E 4E *toggles the option ON and OFF*

P68E 4E OFF: Radio Key Panic triggers control panel Panic
P68E 4E ON: Radio Key Panic pulses AUX1

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P68E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Radio Key siren warning disabled

NOTES:
•

RADIO KEY ARMING, UNSEALED ZONE WARNING

Setting this option ON allows a 2 second SIREN warning if there is an unsealed zone in an Area Armed by a Radio Key.

PROGRAMMING SEQUENCE:

P68E 5E *toggles the option ON and OFF*

P68E 5E OFF: Radio Key arming, siren warning disabled
P68E 5E ON: Radio Key arming, siren warning enabled

P68E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No 24hr Fire siren sound

NOTES:
• The keypad key sequence for FIRE (3 E) always outputs the FIRE siren sound

24HR ZONE FIRE SIREN SOUND

This option changes the siren sound when a 24hr zone is triggered.

PROGRAMMING SEQUENCE:

P68E 6E *toggles the option ON and OFF*

P68E 6E OFF: Fire siren sound disabled
P68E 6E ON: Fire siren sound enabled

P68E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: RK4 radio key for AUX1 disabled

NOTES:
• RELATED OPTIONS:
P68E 3E or 4E must be on. (These options enable AUX1 to be riggered by a radio key).

See: **TABLE, RADIO KEY TO AUX1**

RK4 RADIO KEY AUX BUTTON TO AUX1

Ness RK4 radio key only. This option changes P68E 3E and 4E to work with the AUX button button of an RK4 radio key instead of the PANIC button.

PROGRAMMING SEQUENCE:

P68E 7E *toggles the option ON and OFF*

P68E 7E OFF: RK4 radio key for AUX1 disabled
P68E 7E ON: RK4 radio key for AUX1 enabled

Table: RADIO KEY TO AUX1

	P68E		
	3E	4E	7E
AUX1 disabled	OFF	OFF	(ON or OFF)
PANIC toggles AUX1	ON	OFF	OFF
PANIC pulses AUX1	OFF	ON	OFF
AUX toggles AUX1	ON	OFF	ON
AUX pulses AUX1	OFF	ON	ON

Note 1: If both 3E & 4E are on, then 4E has priority, (the output will Pulse).

Note 2: AUX1 can be disabled for use by a radio key, but other panel options can still trigger the output.

P68E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Quiet Chirps disabled

NOTES:
• RELATED OPTIONS:
P64E 4E Arm/Disarm Chirps

QUIET CHIRPS ON ARM/DISARM

This quietens the siren chirps that are made whenever keyswitch or radio key Arming or Disarming is used.

(Arm/Disarm Chirps must be enabled at P64E 4E).

PROGRAMMING SEQUENCE:

P68E 8E *toggles the option ON and OFF*

P68E 8E OFF: Quiet Chirps disabled
P68E 8E ON: Quiet Chirps enabled

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OPTION No	DESCRIPTION	1E ARM1 pulse output	2E ARM2 pulse output	3E Quiet Monitor siren	4E 6 beeps on Arming	5E Radio Key Monitor Arming	6E .	7E .	8E .
P69E	Miscellaneous options 2								

ON = Factory default setting.

P69E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: ARM1 output toggles

NOTES:
- This is useful as a Smoke Detector reset output with an optional external relay.
- RELATED OPTIONS:
  P60E 8E Delay ARM1/ARM2 outputs

ARM1 PULSE OUTPUT

This option selects the ARM1 output to pulse on for 2 seconds whenever arming or disarming of Area1. (The ARM1 output normally toggles when arming/disarming).

Note also that when Arming with the P60E 8E option selected that the pulse will occur at the end of Exit Time.

PROGRAMMING SEQUENCE:

P69E 1E *toggles the option ON and OFF*

P69E 1E OFF: ARM1 output toggles
P69E 1E ON: ARM1 output pulses

P69E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: ARM2 output toggles

NOTES:
- This is useful as a Smoke Detector reset output with an optional external relay.
- RELATED OPTIONS:
  P60E 8E Delay ARM1/ARM2 outputs

ARM2 PULSE OUTPUT

This option selects the ARM2 output to pulse on for 2 seconds whenever Arming or Disarming of Area2.

(The ARM2 output normally toggles when arming/disarming).

Note also that when Arming with the P60E 8E option selected that the pulse will occur at the end of Exit Time.

PROGRAMMING SEQUENCE:

P69E 2E *toggles the option ON and OFF*

P69E 2E OFF: ARM2 output toggles
P69E 2E ON: ARM2 output pulses

P69E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Normal siren sound in Monitor Mode

NOTES:
- This does not affect the RESET output

QUIET MONITOR SIREN

This option selects the 'Quiet Siren' sound in Monitor Mode. The Quiet Siren sound is a continuous "beep beep beep" sound rather than the normal siren sound.

PROGRAMMING SEQUENCE:

P69E 3E *toggles the option ON and OFF*

P69E 3E OFF: Normal siren sound in Monitor Mode
P69E 3E ON: Quiet Siren sound in Monitor Mode

P69E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Keypad gives 3 beeps on Arming

NOTES:
- The keypad beeps on Arm/Disarm when Arming/Disarming by keypad, keyswitch or by Radio Key

6 BEEPS ON ARMING

Normally the keypad/s onboard SONALERT gives 3 beeps when the D16 is Armed. Turning this option ON will give 6 keypad beeps when Arming.

PROGRAMMING SEQUENCE:

P69E 4E *toggles the option ON and OFF*

P69E 4E OFF: Keypad gives 3 beeps on Arming
P69E 4E ON: Keypad gives 6 beeps on Arming

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P69E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Radio Keys cannot Arm Monitor Mode

NOTES:
- Radio Key Monitor Arming will work only if one or more zones have been programmed as Monitor Zones (P51E).
- When using a Radio Keypad to Monitor arm, ensure that the ARM ONLY option is OFF for the USER CODE on the panel. Otherwise further MONITOR E keypresses on the Radio keypad could AREA arm the panel.

RADIO KEY MONITOR ARMING

Setting this option on allows MONITOR Mode arming by Radio Key.

PROGRAMMING SEQUENCE:

P69E 5E *toggles the option ON and OFF*

P69E 5E OFF: Radio Key Monitor Mode Arming disabled
P69E 5E ON: Radio Key Monitor Mode Arming enabled

OPERATION:

Panel version 4 - Press the Radio Key OFF button twice within 4 seconds.

Panel version 4.5 and later - Press the Radio Key OFF button twice within 4 seconds.
or.... - Press the Radio Key ON button twice within 5 seconds.

P69E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Mains Fail alarm normal

NOTES:
This does not affect Dialler mains fail reporting or saving to the History memory or operation of the Mains Fail output on the Output Expander.

DISABLE MAINS FAIL ALARM

When set ON, a Mains Fail alarm is: 1. Not displayed on the keypad, 2. Does not give warning beeps, 3. Is not saved to MEMORY and the MEMORY display does not flash.

PROGRAMMING SEQUENCE:

P69E 6E *toggles the option ON and OFF*

P69E 6E OFF: Mains Fail alarm operates normally
P69E 6E ON: Mains Fail alarm is disabled

P69E 7E

P69E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
7E & 8E OFF

NOTES:

RK4 RADIO KEY TOGGLES AUX2 OUTPUT

RK4 RADIO KEY PULSES AUX2 OUTPUT

These two options select the RK4 radio key AUX button to the AUX2 output.

PROGRAMMING SEQUENCE:

P69E 7E & 8E *toggles the option ON and OFF*

P69E 7E when selected on, toggles the panel's AUX 2 output when the AUX button is pressed on the Ness RK4 Radio Key.

P69E 8E when selected on, pulses the panel's AUX 2 output when the AUX button is pressed on the Ness RK4 Radio Key.

Table: RADIO KEY TO AUX2

	P69E	
	7E	8E
AUX2 disabled	OFF	OFF
AUX toggles AUX2	ON	OFF
AUX pulses AUX2	OFF	ON

Note: If both 7E & 8E are on, then the output is disabled.

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OPTION No	DESCRIPTION	FACTORY DEFAULT
P70E	Telephone Number 1 - Primary	none
P71E	Telephone Number 2 - Secondary	none
P80E	Telephone Number 3 - Test Calls	none
P81E	Telephone Number 4 - Callback for Up/download	none
P00E	Follow Me Telephone Number - For Audible Dialling	none

OPTION No	DESCRIPTION	FACTORY DEFAULT
P72E	Account Number 1	0000
P73E	Account Number 2	0000

P70E, P71E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No telephone numbers

NOTES:
- If telephone number 2 is disabled, all calls are made on telephone number 1 and the setting of P87E 1E has no effect.
- If telephone number 3 is disabled, all test calls are made on telephone number 1&2
- Any keypress will stop the telephone number display sequence
- RELATED OPTIONS:
  P87E 1E Alternate Primary/Secondary telephone numbers
  P86E 1E Disable dialler (still allows remote up/download if programmed)

TELEPHONE NUMBERS 1 & 2

The D16 can dial up to 2 phone numbers when an event is to be transmitted to a remote location. Telephone numbers may be up to 15 digits long.

PROGRAMMING SEQUENCE:

P70E *existing telephone number is displayed*
[ENTER NEW TELEPHONE No] E *new telephone number is displayed*

EXAMPLE: To program Telephone No.1 to be 03 1234 1234:
P70E0312341234E

SPECIAL FUNCTIONS FOR ALL TELEPHONE NUMBERS

TO CLEAR A TELEPHONE NUMBER

To clear a telephone number, enter the MEMORY key in place of the telephone number. Example, to clear a Telephone Number 1 press: P70E MEMORY E

SPECIAL CHARACTERS (Applies to all telephone Numbers)

Pauses, * (star) or # (hash) (VF digits) can be included in the dialling sequence by using the keys in the table below.

SPECIAL CHARACTER	KEY ENTRY	DISPLAYED ON LCD DISPLAY
PAUSE (1.6sec)	ARM Key	12
* (Star)	MONITOR Key	10
# (Hash)	EXCLUDE Key	11

P72E, P73E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
P72E Account No.1: 0000
P73E Account No.2: 0000

NOTES:
- RELATED OPTIONS:
  P79E Account No.2 zones

Also see page 41, Hex Client Codes

ACCOUNT NUMBER 1 & 2

Account numbers for identifying the panel to the Central Station. Area 1 Open/Close reports will report on Account No.1 and Area 2 Open/Close reports will report on Account No.2.

Zone Alarms can be assigned to report on either Account Number as set by Option P79E.

All miscellaneous events (eg. Tampers, Mains Fail) will report on Account No. 1.

PROGRAMMING SEQUENCE:

P72E (or P73E) *existing account number is displayed*
[ENTER NEW ACCOUNT No] E *new account number is displayed*

EXAMPLE: To program Account No.1 to be 1239:
P72E1239E

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HEX CLIENT CODE NOTES:

Note 1: If using the Ness LED keypad for programming, the Hex digits will not be displayed but are still programmed.

Note 2: Hex digit A is not allowed.

Note 3: Entering Hex digits by keypad applies to D16 V4.6 and later. Previous D16 versions by using NessComms Up/Download software V4.6.

HEX CLIENT CODES

Dialler client codes can now be entered in Hexadecimal. Use the following keys to enter the hex digits B, C, D, E or F.

HEX DIGIT	KEY ENTRY	DISPLAYED ON LCD DISPLAY
B	* Key	11
C	ARM Key	12
D	MONITOR Key	13
E	EXCLUDE Key	14
F	MEMORY key	15

P80E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No telephone numbers

NOTES:
- RELATED OPTIONS:
  P89E 1E Enable test calls
  P83E Test call interval
  P84E Test call start delay

TELEPHONE NUMBER 3 - TEST CALLS

Phone Number 3 is used to send Test Calls. If it is not programmed then Test Calls are sent using Telephone No 1 & 2.

PROGRAMMING SEQUENCE:

P80E *existing telephone number is displayed*
[ENTER NEW TELEPHONE No] E *new telephone number is displayed*

EXAMPLE: To program Telephone No.3 to be 03 2468 1234:
P80E0324681234E

P81E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No telephone numbers

NOTES:
- RELATED OPTIONS:
  P90E 8E Enable Callback

TELEPHONE NUMBER 4 - CALLBACK

Phone Number 4 is used for upload/download.

Prevents unauthorised up/download - the panel will dial the callback telephone number to commence an up/download session.

Up/download without callback is allowed by turning off option P90E 8E.

PROGRAMMING SEQUENCE:

P81E *existing telephone number is displayed*
[ENTER NEW TELEPHONE No] E *new Telephone No.4 is displayed*

P00E

PROGRAM MODE LEVEL:
User, Installer, Remote by PC

FACTORY DEFAULT:
No telephone numbers

NOTES:
- If the Follow Me telephone number is disabled, all audible format calls are made on telephone numbers 1 & 2.
- RELATED OPTIONS:
  P86E 3E Audible DTMF format
  P86E 4E Audible Pulse format
  P86E 5E Contact ID + Audible DTMF
  P86E 6E Contact ID + Audible Pulse

FOLLOW ME TELEPHONE NUMBER

The Follow Me telephone number is only used in Audible Dialling mode. (P86E 3E, 4E, 5E or 6E are on).

The Follow Me telephone number can be programmed in User Program Mode. If the Follow Me number is programmed, then the primary & secondary numbers are ignored.

IF P86E 3E or 4E ARE ENABLED (AUDIBLE MONITORING)
If the Follow Me number is programmed, the primary & secondary numbers are ignored.

IF P86E 5E or 6E ARE ENABLED (CONTACT ID + AUDIBLE)
The telephone numbers programmed at P70E & P71E will be used to send the mesage to the central station. The message is also repeated in audible format to the telephone number (if any) programmed at P00E.

PROGRAMMING SEQUENCE:

P00E *existing telephone number is displayed*
[ENTER NEW TELEPHONE No] E *new telephone number is displayed*

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OPTION No	DESCRIPTION	Zones 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P74E	Report zone alarms	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P76E	Report zone restorals	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
P78E	Multiple zone alarms																
P79E	Account No.2 zones																

ON = Factory default setting

P74E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
All zones report Alarms

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

REPORT ZONE ALARMS

This option selects which zone inputs will send Alarm reports to the Central Station.

PROGRAMMING SEQUENCE:

P74E 1E-16E *toggles the option ON and OFF*

P74E 1E-16E OFF: Alarm reporting disabled for that zone
P74E 1E-16E ON: Alarm reporting enabled for that zone

P76E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
All zones report Restorals

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON
- RELATED OPTIONS:
  P82E 1E Send Restoral immediately
  P82E 2E Send Restoral after siren time
  P82E 3E Send Restoral on Disarm & seal
  P82E 4E Send Restoral on Disarm always

REPORT ZONE RESTORALS

This option selects which zone inputs will send Restoral reports to the Central Station. Only zones that have previously sent an Alarm will send a Restoral.

PROGRAMMING SEQUENCE:

P76E 1E-16E *toggles the option ON and OFF*

P76E 1E-16E OFF: Restoral reporting disabled for that zone
P76E 1E-16E ON: Restoral reporting enabled for that zone

P78E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No zones report Multiple Alarms

NOTES:
- Only zones that have previously sent an Alarm will send a Restoral
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON
- RELATED OPTIONS:
  P89E 4E Swinger shutdown

REPORT MULTIPLE ZONE ALARMS

Zones selected for Multiple Zone Alarms will report each time the zone alarms and without a restore being sent. The number of reports is a maximum of 15. The number of alarms sent for each Multiple Zone Alarm can be reduced to 3 by using the swinger shutdown option P89E 4E.

Zones not selected report only once, until reset by an opening or a valid code.

PROGRAMMING SEQUENCE:

P78E 1E-16E *toggles the option ON and OFF*

P78E 1E-16E OFF: Multiple Zone Alarms disabled for that zone
P78E 1E-16E ON: Multiple Zone Alarms enabled for that zone

P79E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
All zones report Restorals

NOTES:

ACCOUNT NO.2 ZONES

Zones selected to be Account No.2 zones will report their Alarms, Restorals and Excludes on Client code 2.

PROGRAMMING SEQUENCE:

P79E 1E-16E *toggles the option ON and OFF*

P79E 1E-16E OFF: Multiple Zone Alarms disabled for that zone
P79E 1E-16E ON: Multiple Zone Alarms enabled for that zone

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OPTION No	DESCRIPTION	1E Duress	2E Medical	3E K/P & K/S Panic	4E Fire	5E Panel Tamper	6E External Tamper	7E Keypad Tamper	8E Exit Install mode	9E Radio Tamper	10E Radio Panic	11E Radio Battery	12E Supervision Fail	13E Panel Battery	14E Mains Fail	15E	16E
P75E	Report Misc. Alarms			ON		ON	ON	ON		ON	ON			ON	ON		
P77E	Report Misc. Restorals	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON

ON = Factory default setting.

P75E 1E-16E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
see table

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

REPORT MISCELLANEOUS ALARMS

This option selects which Miscellaneous alarms will trigger the dialler to send Alarm reports to the Central Station.

PROGRAMMING SEQUENCE:

P75E 1E-16E *toggles the option ON and OFF*

P75E 1E-16E OFF: Alarm reporting disabled for that miscellaneous alarm
P75E 1E-16E ON: Alarm reporting enabled for that miscellaneous alarm

P77E 1E-16E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
see table

NOTES:
- Mains Fail and Battery Fail Restorals are sent when proper power has been restored
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

REPORT MISCELLANEOUS RESTORALS

This option selects which Miscellaneous Alarms will send Restoral reports to the Central Station. The selections will report Miscellaneous Alarms restored from the alarmed to the non-alarmed state.

Miscellaneous Alarms which have been selected to send a Restoral report will always send the Restoral report when a valid code is entered to reset an alarm or at Opening.

PROGRAMMING SEQUENCE:

P77E 1E-16E *toggles the option ON and OFF*

P77E 1E-16E OFF: Restoral reporting disabled for that miscellaneous alarm
P77E 1E-16E ON: Restoral reporting enabled for that miscellaneous alarm

OPTION No	DESCRIPTION	1E Restoral immediately	2E Restoral after siren time	3E Restoral on Disarm & seal	4E Restoral on Disarm always	5E	6E	7E	8E
P82E	Zone Restoral reporting options				ON				

ON = Factory default setting.

P82E 1E-4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
4E, ON: Always send Restoral on Disarm

NOTES:
- RELATED OPTIONS:
  P76E Report zone restorals

RESTORAL REPORTING OPTIONS

This option selects when the dialler sends zone Restoral reports. Only one of the following options may be selected.

Restoral reporting options also apply to 24hr zones.

PROGRAMMING SEQUENCE:

P82E 1E-4E *toggles the option ON and OFF*

P82E 1E: Send Restoral immediately
P82E 2E: Send Restoral after siren time
P82E 3E: Send Restoral on Disarm & seal
P82E 4E: Send Restoral on Disarm always

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OPTION No	DESCRIPTION	DEFAULT	NOTE
P83E	Test Call Interval	84	x2 = 168hrs (7 days)
P84E	Time Before Next Test Call	6	x2 = 12hrs

P83E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
84 (=168hrs =7 days)

NOTES:
- Enter a value from 1 to 99
- RELATED OPTIONS:
  P89E 1E Enable Test Calls
  P84E Time Before Next Test Call

TEST CALL INTERVAL

Test calls to the Central Station can be sent at intervals between 2 and 198 hours in 2 hour increments.

Programmable from 2 to 198 Hours. Enter a value between 1 and 99. (This is automatically multiplied by 2).

Test Calls must be enabled by option P89E 1E.

PROGRAMMING SEQUENCE:

P83E *existing Test Call Interval time is displayed*
[ENTER NEW TIME] E *new Test Call Interval time is displayed*

EXAMPLE: To program daily test calls:
P83E12E

P84E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
6 (=12hrs)

NOTES:
- Enter a value from 1 to 99
- If Test Calls are to start immediately, then the value is set to 0.
- The Time Before Next Test Call is constantly updated. When viewed, the current value will be displayed (not the initially entered value).
- RELATED OPTIONS:
  P89E 1E Enable Test Calls
  P83E Test Call interval

TIME BEFORE NEXT TEST CALL

This option sets the time before the next Test Call and is used to set the preferred time for Test Calls. Programmable from 2 to 198 Hours. Enter a value between 1 and 99. (This is automatically multiplied by 2).

EXAMPLES:

A/ New Installation: Set the time before the first test call.
E.g., If you are programming the panel at 5pm and you want test calls to be sent at 1am. Enter P84E 4E (4 x 2 =8hrs. Therefore 5pm + 8hrs =1am).

B/ Existing Installation: To reset the time that test calls are sent.
E.g., Our example panel is sending test calls at 1am and you want to change it to 2am. If you are programming the panel at 6pm, enter P84E 4E (4 x 2 =8hrs. Therefore 6pm + 8hrs =2am).

PROGRAMMING SEQUENCE:

P84E *existing Time Before Next Test Call is displayed* **(See note 3)**
[ENTER NEW TIME] E *new Time Before Next Test Call is displayed*

ON = Factory default setting.

P85E 1E-3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
1E, ON: Auto Dialling Method

NOTES:
- Only one option is allowed to be ON

DIALLING METHOD

The dial format is determined by the detected Dial Tone. By default, if no dial tone is detected after looping the line then the dialler will attempt to dial regardless alternating between PULSE (Decadic) first and then DTMF dialling.

PROGRAMMING SEQUENCE:

P85E 1E-3E *turns the option ON*

P85E 1E: Auto Dialling (PULSE or DTMF)
P85E 2E: Pulse Dialling always
P85E 3E: DTMF Dialling always

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OPTION No	DESCRIPTION	1E Disable dialler	2E Contact ID format	3E Audible DTMF format	4E Audible PULSE format	5E Contact ID + Audible DTMF	6E Contact ID + Audible PULSE	7E	8E
P86E	Reporting Formats		ON						

ON = Factory default setting.

P86E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
Off: dialler enabled

NOTES:
- This option is useful for temporary disabling of the dialler without affecting other dialler options.
- Only one option in the range P86E 1E—6E is allowed to be ON

DISABLE DIALLER

This option disables the dialler even if telephone numbers and other dialler options are programmed.

Up download or remote telephone access remain enabled.

PROGRAMMING SEQUENCE:

P86E 1E *turns the option ON*

P86E 1E ON: Dialler disabled

P86E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Contact ID format enabled

NOTES:
- Only one option in the range P86E 1E—6E is allowed to be ON

CONTACT ID FORMAT

This option enables the reporting of alarms to a Central station via telephone numbers 1 & 2 using Contact ID format.

PROGRAMMING SEQUENCE:

P86E 2E *turns the option ON*

P86E 2E ON: Contact ID format enabled

P86E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF

NOTES:
- Only one option in the range P86E 1E—6E is allowed to be ON

AUDIBLE DTMF FORMAT

For Audible Monitoring to any telephone or mobile phone. The last digit of the Account number and the zone alarm are sent in Audible DTMF format.

The message is repeated for 45 seconds or until kissed-off by the receiving telephone.

PROGRAMMING SEQUENCE:

P86E 3E *turns the option ON*

P86E 3E ON: Audible DTMF format enabled

P86E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF

NOTES:
- Only one option in the range P86E 1E—6E is allowed to be ON
- This is the best option to select for Audible Monitoring.

AUDIBLE PULSE FORMAT

For Audible Monitoring to any telephone or mobile phone. The last digit of the Account number and the zone alarm are sent in Audible PULSE format.

The message is repeated for 45 seconds or until kissed-off by the receiving telephone.

PROGRAMMING SEQUENCE:

P86E 4E *turns the option ON*

P86E 4E ON: Audible PULSE format enabled

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P86E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF

NOTES:
- Only one option in the range P86E 1E—6E is allowed to be ON

CONTACT ID + AUDIBLE DTMF FORMAT

For simultaneous Central Station and Audible Monitoring.

The alarm message will be sent to the Central Station on the Primary telephone number and then in audible DTMF format to the Follow Me telephone number.

PROGRAMMING SEQUENCE:

P86E 5E *turns the option ON*

P86E 5E ON: Contact ID + Audible DTMF format enabled

P86E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF

NOTES:
- Only one option in the range P86E 1E—6E is allowed to be ON

CONTACT ID + AUDIBLE PULSE FORMAT

For simultaneous Central Station and Audible Monitoring.

The alarm message will be sent to the Central Station on the Primary telephone number and then in audible PULSE format to the Follow Me telephone number.

PROGRAMMING SEQUENCE:

P86E 6E *turns the option ON*

P86E 6E ON: Contact ID + Audible PULSE format enabled

The D16 reports alarms to the Central Station using Contact ID dialler format.

The message format is fixed as shown in the Contact ID Codes Table.

THE MESSAGE TAKES THE FORM OF:

ssss	Client Code 0000 - 9999
Q = 1	New Event or Open
Q = 3	Restore or Close
dd	User ID (1 to 15)
zz	Zone ID (1 to 16)
aa = 01	Area 1
aa = 02	Area 2
aa = 01	Monitor area
aa = 00	24 Hr Area
k	Checksum (0 to 0f hex)

CONTACT ID CODES TABLE

REPORT NAME	PREFIX	Q	XYZ	GG	CCC	SUFFIX
Zone 1– Zone 16 Alarm	ssss 18	q	**130**	aa	001–016	k
Duress	ssss 18	1	**121**	01	030	k
Keyswitch Panic	ssss 18	1	**120**	01	031	k
Keypad Panic	ssss 18	1	**120**	01	032	k
Radio Key Panic	ssss 18	1	**120**	01	1dd	k
Medical Alarm	ssss 18	1	**100**	01	033	k
Fire	ssss 18	1	**110**	01	034	k
Exit Install mode	ssss 18	1	**306**	01	035	k
External Tamper	ssss 18	q	**137**	01	040	k
Internal Tamper	ssss 18	q	**137**	01	041	k
Keypad Tamper	ssss 18	q	**137**	01	042	k
Radio Sensor Supervision	ssss 18	q	**381**	01	4zz	k
Radio Sensor Tamper	ssss 18	q	**383**	01	2zz	k
Radio Sensor Low Battery	ssss 18	q	**384**	01	3zz	k
Mains Fail	ssss 18	q	**301**	01	050	k
Panel Battery Fail	ssss 18	q	**309**	01	051	k
Open	ssss 18	1	**402**	aa	0dd	k
Force Open (Cancel)	ssss 18	1	**406**	aa	0dd	k
Close	ssss 18	3	**402**	aa	0dd	k
Test Report	ssss 18	1	**602**	01	063	k
Zone 1-16 Manual Exclude	ssss 18	q	**573**	aa	001-008	k
Zone 1-16 Auto Exclude	ssss 18	q	**380**	aa	001-008	k

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OPTION No	DESCRIPTION	1E Split dial Phone Nos.	2E Check for dial tone	3E .	4E 4 dialling attempts	5E .	6E .	7E .	8E .
P87E	Miscellaneous Dialling Options		ON		ON				

ON = Factory default setting.

P87E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Alternate Dial

NOTES:
- RELATED OPTIONS:
  P87E 4E Number of Dialling attempts

SPLIT DIAL PRIMARY/SECONDARY PHONE NUMBERS

This option selects the order in which Telephone numbers 1 & 2 are dialled.

PROGRAMMING SEQUENCE:

P87E 1E *toggles the option ON and OFF*

P87E 1E OFF: **Alternate Dial**
Dial Telephone No.1 on the first attempt. If no answer, dial Telephone No.2. Continue alternating until successful.

P87E 1E ON: **Split Dial**
Dial Telephone No.1 for half of the call attempts. If unsuccessful, dial Telephone No.2 for the last half of call attempts.

P87E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Dial only with dial tone

NOTES:

CHECK FOR DIAL TONE

The dialler normally dials only if a dial tone is detected. The dialler can be forced to dial without a dial tone. Allows use on PABXs with non-standard dial tones.

PROGRAMMING SEQUENCE:

P87E 2E *toggles the option ON and OFF*

P87E 2E OFF: Dial without dial tone
P87E 2E ON: Dial only with dial tone

P87E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: 4 dialling attempts

NOTES:
- Sets the total number of dialling attempts. E.g. If 4 dialling attempts is selected, this means 2 attempts per telephone number.
- RELATED OPTIONS:
  P87E 1E Alternate dialling

NUMBER OF DIALLING ATTEMPTS

Sets the number of dialling attempts when sending reports.

OFF: sets a maximum 10 dial attempts before a 5 minute sleep and 10 more retries if unsuccessful.

ON: allows a maximum of 4 dial attempts before a 5 minute sleep and 4 more retries if unsuccessful.

If all attempts fail the dialler waits for the next trigger event. The previously unsuccessful report will be included in the new message.

When sending Test Calls, the time between dialling attempts increases to 60 minutes for the second round of dialling. If a Test Call is unsuccessful after the first round of calls are made, another call is made after 5 minutes. If this call fails then subsequent calls are made every hour (up to the maximum number of calls).

PROGRAMMING SEQUENCE:

P87E 4E *toggles the option ON and OFF*

P87E 4E OFF: Maximum 10 dialling attempts
P87E 4E ON: Maximum 4 dialling attempts

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OPTION No	DESCRIPTION	1E AREA1 Open/Close report	2E AREA2 Open/Close report	3E Chirp Siren on kiss-off	4E Flash Strobe on kiss-off	5E Forced Opening report	6E Delay Closing report	7E Manual Exclude report	8E Auto Exclude report
P88E	Open/Close reporting options					ON		ON	ON

ON = Factory default setting.

P88E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No AREA1 Open/Close reports

NOTES:

AREA1 OPEN/CLOSE REPORTS

Enables or disables sending of AREA1 Open/Close reports.

The User ID of the code used is included in the report. Keyswitch Arming and Shortcut Arming are identified as User 15.

PROGRAMMING SEQUENCE:

P88E 1E *toggles the option ON and OFF*

P88E 1E OFF: No AREA1 Open/Close reports
P88E 1E ON: AREA1 Open/Close reports enabled

P88E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No AREA2 Open/Close

NOTES:

AREA2 OPEN/CLOSE REPORTS

Enables or disables sending of AREA2 Open/Close reports.

PROGRAMMING SEQUENCE:

P88E 2E *toggles the option ON and OFF*

P88E 2E OFF: No AREA2 Open/Close reports
P88E 2E ON: AREA2 Open/Close reports enabled

P88E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Siren Chirp on kiss-off

NOTES:
- RELATED OPTIONS:
  P88E 4E Flash Strobe on kiss-off

SIREN CHIRP ON KISS-OFF

Selects a 2 Second Siren burst on a successful Closing report. This is used to give audible indication that the dialler has successfully sent the Arming report.

PROGRAMMING SEQUENCE:

P88E 3E *toggles the option ON and OFF*

P88E 3E OFF: No Siren Chirp on kiss-off
P88E 3E ON: Siren Chirp on kiss-off enabled

P88E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Strobe Flash on kiss-off

NOTES:
- RELATED OPTIONS:
  P88E 3E Siren Chirp on kiss-off

STROBE FLASH ON KISS-OFF

Selects a 2 Second Strobe on a successful Closing report. This is used to give visual indication that the dialler has successfully sent the Arming report.

PROGRAMMING SEQUENCE:

P88E 4E *toggles the option ON and OFF*

P88E 4E OFF: No Strobe Flash on kiss-off
P88E 4E ON: Strobe Flash on kiss-off enabled

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P88E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Forced opening Reports enabled

NOTES:
- This option is used to indicate to the Central Station that an alarm has been reset by a valid user.

  Usually used in cases where Open/Close reports are normally selected OFF.

FORCED OPENING REPORT

If Forced Opening Report is selected ON - when an alarm has been reset by a valid User Code (or Radio Key), the dialler will send an Opening report along with a restoral report for the zone or miscellaneous input which caused the alarm.

PROGRAMMING SEQUENCE:

P88E 5E *toggles the option ON and OFF*

P88E 5E OFF: No Forced opening Reports
P88E 5E ON: Forced opening Reports enabled

P88E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Closing Reports sent on Arming

NOTES:
- RELATED OPTIONS:
  P88E 1E AREA1 Open/Close reports
  P88E 2E AREA2 Open/Close reports

DELAY CLOSING REPORT

If selected ON, Closing reports (if enabled) are sent at the end of Exit Time. Normally, Closing reports are sent immediately on Arming.

PROGRAMMING SEQUENCE:

P88E 6E *toggles the option ON and OFF*

P88E 6E OFF: Closing Reports sent on Arming
P88E 6E ON: Closing Reports sent at end of Exit Time

P88E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Manual Exclude Reports enabled

NOTES:
- RELATED OPTIONS:
  P88E 8E Auto Exclude Reports

MANUAL EXCLUDE REPORT

Enables Manual Exclude Reports for Zones 1-16. Exclude Reports for 24hr zones are sent on exiting EXCLUDE mode.

PROGRAMMING SEQUENCE:

P88E 7E *toggles the option ON and OFF*

P88E 7E OFF: No Manual Exclude Reports
P88E 7E ON: Manual Exclude Reports enabled

P88E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Auto Exclude Reports enabled

NOTES:
-
  P88E 7E Manual Exclude Reports

AUTO EXCLUDE REPORT

Enables Auto Exclude Reports for Zones 1-16. Zones not sealed on Arming will be reported as Auto Excluded..

PROGRAMMING SEQUENCE:

P88E 8E *toggles the option ON and OFF*

P88E 8E OFF: No Auto Exclude Reports
P88E 8E ON: Auto Exclude Reports enabled

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OPTION No	DESCRIPTION	1E Enable Test Calls	2E Mains Report delay	3E Listen-in to dialler	4E Swinger shutdown	5E Line Fault Monitor	6E Line Fault to AUX2	7E .	8E .
P89E	Miscellaneous Reporting options	ON	ON		ON				

ON = Factory default setting.

P89E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Test Calls enabled

NOTES:
- RELATED OPTIONS:
  P83E Test Call Interval
  P84E Time before next Test call

ENABLE TEST CALLS

This option enables the reporting of dialler test calls to the Central station.

PROGRAMMING SEQUENCE:

P89E 1E *toggles the option ON and OFF*

P89E 1E OFF: No Test Calls
P89E 1E ON: Test Calls enabled

P89E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Mains Fail report is delayed

NOTES:

MAINS REPORT DELAY

This option allows Mains Fail reports to be delayed by one hour if the mains power has been off continuously for that time. Normally, the Mains Fail report is sent immediately the power fails.

PROGRAMMING SEQUENCE:

P89E 2E *toggles the option ON and OFF*

P89E 2E OFF: Mains Fail reports immediately
P89E 2E ON: Mains Fail report is delayed by 1 hour

P89E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Listen-In

NOTES:
- For convenient and private Listen-In, temporarily connect a spare horn speaker to the Siren output.

LISTEN-IN TO DIALLER

This is a diagnostic feature for installers. Listen-In is turned on for a minimum of 4 minutes after exiting Program Mode.

During Listen-In, the dialler message and other telephone tones can be heard through the Siren output (at low volume) while the dialler is sending reports. The 4-minute period is restarted whenever any key on the keypad is pressed.

To turn Listen-In off, go back into Installer Program mode and toggle the option OFF.

PROGRAMMING SEQUENCE:

P89E 3E *toggles the option ON and OFF*

P89E 3E OFF: No Listen-In
P89E 3E ON: Listen-In enabled

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P89E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
ON: Swinger Shutdown enabled

NOTES:
- This prevents unnecessary multiple alarms reported to the Central station in cases, for example, where a door is 'swinging' in the wind.

SWINGER SHUTDOWN

Limits the number of calls made by a zone alarm when Multiple Zone Alarms are enabled for that zone.

If enabled, multiple reports are limited to three per zone.

PROGRAMMING SEQUENCE:

P89E 4E *toggles the option ON and OFF*

P89E 4E OFF: No Swinger Shutdown (unlimited multiple reports)
P89E 4E ON: Swinger Shutdown enabled (maximum 3 reports per zone)

P89E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Line Fault Monitor

NOTES:
- RELATED OPTIONS:
  P89E 6E Line Fault to AUX2

LINE FAULT MONITOR

When this option is enabled, the telephone line is regularly tested. If the telephone line is not found, the Line light will commence flashing.

PROGRAMMING SEQUENCE:

P89E 5E *toggles the option ON and OFF*

P89E 5E OFF: No Line Fault Monitor
P89E 5E ON: Line Fault Monitor enabled

P89E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Line Fault output

NOTES:
- RELATED OPTIONS:
  P89E 5E Line Fault Monitor

LINE FAULT TO AUX2

When this option is enabled, a telephone line fault condition will turn ON the AUX2 output. AUX2 will turn OFF when the telephone line is restored.

PROGRAMMING SEQUENCE:

P89E 6E *toggles the option ON and OFF*

P89E 6E OFF: No Line Fault output
P89E 6E ON: Line Fault to AUX2 enabled

P89E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: Clock uses mains frequency timing

NOTES:

CLOCK TIMING

When set ON, the Test Report Timer uses the panel's onboard crystal oscillator instead of the external mains power supply frequency.

Use this option if the mains frequency is not stable over long periods. (Not necessary in Australia and New Zealand).

PROGRAMMING SEQUENCE:

P89E 7E *toggles the option ON and OFF*

P89E 7E OFF: Clock uses mains frequency timing
P89E 7E ON: Clock uses internal timing

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OPTION No	DESCRIPTION	1E Upload/Download	2E Direct Connect	3E Remote Arming	4E Remote Disarming	5E Remote AUX control	6E Remote Status reporting	7E Remote Event reporting	8E Callback mode
P90E	Upload/Download options								

ON = Factory default setting.

P90E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Remote Access

NOTES:
- RELATED OPTIONS:
  P91E Required Rings

REMOTE ACCESS

When selected On, this option allows the panel to be remotely upload/ downloaded by a remote computer or controlled by a remote telephone.

When the option is Off, the panel will not answer incoming telephone calls, preventing any type of remote access.

PROGRAMMING SEQUENCE:

P90E 1E *toggles the option ON and OFF*

P90E 1E OFF: No Remote Access
P90E 1E ON: Remote Access enabled

P90E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Direct Connect

NOTES:
- Remote Access must also be enabled
- RELATED OPTIONS:
  P90E 1E Enable Upload/Download

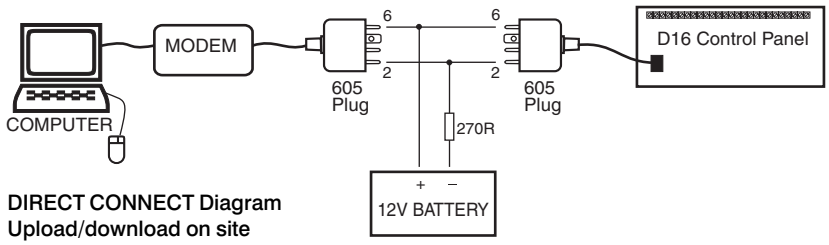
DIRECT CONNECT

This allows a direct connection to be used between the D16 telephone output and an on site computer with modem.

Direct Connect simulates a telephone line ring and makes the D16 connect immediately to the telephone line.

SEQUENCE:

- The panel must be in Installer Program mode.
- Dial the panel using NessComms™.
- While NessComms is ringing the panel, press P90E 2E.
- This forces the panel to pick up the line and comms can start.



DIRECT CONNECT Diagram
Upload/download on site

P90E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Remote Arming

NOTES:
- Remote Access must also be enabled
- RELATED OPTIONS:
  P90E 1E Enable Upload/Download
- See page 62 for details on Remote Operation by telephone

REMOTE ARMING

Allows the remote Arming of the control panel using a standard DTMF telephone (or mobile phone) from anywhere in the world.

PROGRAMMING SEQUENCE:

P90E 3E *toggles the option ON and OFF*

P90E 3E OFF: No Remote Arming
P90E 3E ON: Remote Arming enabled

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P90E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Remote Disarming

NOTES:

REMOTE DISARMING

Allows the remote Disarming of the control panel using a standard DTMF telephone (or mobile phone) from anywhere in the world.

PROGRAMMING SEQUENCE:

P90E 4E *toggles the option ON and OFF*

P90E 4E OFF: No Remote Disarming
P90E 4E ON: Remote Disarming enabled

P90E 5E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Remote AUX control

NOTES:

REMOTE AUX CONTROL

Enables the remote turn ON/OFF of the AUX1 & AUX2 outputs using a standard DTMF telephone (or mobile phone) from anywhere in the world.

PROGRAMMING SEQUENCE:

P90E 5E *toggles the option ON and OFF*

P90E 5E OFF: No Remote AUX control
P90E 5E ON: Remote AUX control enabled

P90E 6E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Remote Status Reporting

NOTES:

REMOTE STATUS REPORTING

Enables Remote Status Reporting

PROGRAMMING SEQUENCE:

P90E 6E *toggles the option ON and OFF*

P90E 6E OFF: No Remote Status Reporting
P90E 6E ON: Remote Status Reporting enabled

P90E 7E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Remote Event Reporting

NOTES:

REMOTE EVENT REPORTING

Enables Remote Event Reporting

PROGRAMMING SEQUENCE:

P90E 7E *toggles the option ON and OFF*

P90E 7E OFF: No Remote Status Reporting
P90E 7E ON: Remote Status Reporting enabled

P90E 8E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Callback

NOTES:
- RELATED OPTIONS:
  P90E 1E Enable Upload/Download
  P81E Telephone Number 4, Callback

CALLBACK MODE

Enables two methods of connecting by computer for remote upload/download.

NO CALLBACK - Allows remote access by computer as long as the panel's Account Number (P72E) is known. The panel answers on the 2nd incoming call.

WITH CALLBACK - The panel will answer the 2nd call, verify the caller, hang up and then make the Callback using Telephone Number 4.

PROGRAMMING SEQUENCE:

P90E 8E *toggles the option ON and OFF*

P90E 8E OFF: No Callback
P90E 8E ON: Callback Mode enabled

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OPTION No	DESCRIPTION	DEFAULT	NOTE
P91E	Required Rings to answer	1	

P91E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
1

NOTES:
- RELATED OPTIONS:
  P90E 1E to 8E (Remote Access options)

REQUIRED RINGS

Sets the number of double-rings before an incoming call is answered. This is used for Remote Access.

Programmable from 1 to 16 rings. Enter a value between 1 and 16.

PROGRAMMING SEQUENCE:

P91E *existing Required Rings value is displayed*
[ENTER NEW VALUE] E *new Required Rings value is displayed*

OPTION No	DESCRIPTION	Zones 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P94E	"No memory warning" zones																

P94E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
no zones selected

NOTES:
- **0E** will turn all selections OFF
  MEMORY E will turn all selections ON

NO MEMORY WARNING ZONES

Select zones 1 to 8 that do not flash the Memory indicator. The alarm still goes into memory and can be seen when reviewing. (Only zones 1 to 8 can be selected on either the D8 or D16 panels.)

PROGRAMMING SEQUENCE:

P94E 1E-8E *toggles the option ON and OFF*

P94E 1E-8E OFF: Memory Warning operates normally for that zone
P94E 1E-8E ON: Memory Warning is disabled for that zone

SPECIAL FUNCTIONS

SEND DIALLER TEST REPORT

Send a Dialler Test Report to the telephone numer programmed at P70E.
This test operates only in User program mode.

P66666666E *(eight 6's) Triggers dialler and sends test report to Central Station*

SIREN TEST

Turn the Siren, Reset and Strobe Outputs On. Pressing P E will stop the Siren Test (and also exits Program Mode).
This test operates in User and Installer program mode.

P77777777E *(eight 7's) Triggers Siren, Reset, Strobe*

PANEL RESET

This function resets the microprocessor. The effect is the same as powering down and powering up again. Panel Reset operates in User and Installer program mode.

P88888888E *(eight 8's) Panel Reset*

PANEL SOFTWARE VERSION

This function displays the panel software version when in program mode. Displayed in decimal format by the zone LEDs.
Example, version 4.5 is displayed by flashing 4 followed by 5.
This test operates in User and Installer program mode.

P999999999E *(eight 9's) Displays software version*

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These options allow selective restoring of various factory defaults. For example, you can default (clear) all the User Codes, without affecting any other programmed options.

OPTION No	DESCRIPTION	DEFAULT	NOTE
P95E	Clear Radio Devices	not applicable	
P96E	Clear Memory	not applicable	
P97E	Restore Factory Defaults	not applicable	
P98E	Clear User Codes	not applicable	
P99E	Program the Installer Code	000000	

P95E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
[not applicable]

CLEAR RADIO DEVICES

This option clears all Radio Device Codes. (Except Radio Keys assigned to Radio Codes). Options P101E - P116E are defaulted (D16 Radio Devices)

PROGRAMMING SEQUENCE:
P95E *Clears Radio Device Codes*

P96E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
[not applicable]

CLEAR MEMORY

Enter P96E when in Installer Program mode to clear all events in the Alarm memory display.

PROGRAMMING SEQUENCE:
P96E *Clears Alarm Memory display*

P97E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
[not applicable]

NOTES:
- This option DOES NOT clear Radio Device Codes, User Codes or the Installer Code.

FACTORY DEFAULTS

This option restores program options to the factory default values.

The panel options P00E - P08E, P26E - P91E, P117 - P119 are all defaulted.

PROGRAMMING SEQUENCE:
P97E *Restores Factory Defaults*

P98E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
User Code 1: 123
All other codes: [blank]

NOTES:
- This option DOES NOT clear the Installer Code.

CLEAR USER CODES

This option clears all User codes and Radio Codes (Radio Keys) and restores factory default codes.

P09E-P10E are defaulted (Radio Codes assignment)

P11E - P25E are defaulted (User Codes 1-15)

PROGRAMMING SEQUENCE:
P98E *Clears User Codes*

P99E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
000000

NOTES:

PROGRAM THE INSTALLER CODE

Programs the installer code. This code can be 3 to 6 digits long. Factory default installer code is 000000.

PROGRAMMING SEQUENCE:
P99E [Enter new code]**E** [Enter new code again]**E**
(Unlike User Codes, the installer code is not displayed when programming)

For a complete list of factory default values, see the Programming Options Summary on page 63.

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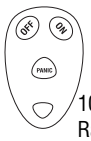
P09E P10E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No Radio Codes

NOTES:

- All User Codes can be Radio Codes except User Code 1 (Master Code) which is always a Keypad Code.
- Each User Code 2-15 can be either a Radio Code or a Keypad Code (not both).
- Radio Key programming is done by 'learning' the code by radio.
- Radio Codes can only be deleted by keypad in the case of a lost Radio Key.
- Radio Keys are allocated to User Codes, so that Open/Close reports are identified by user number when the control panel is base station monitored. (If Open/Close reports are enabled)
- Radio Codes cannot be made Arm Only
- **TIP:** When adding Radio Keys, start at e.g., User Code 9. This will keep codes 1 to 8 free for use as Keypad Codes.
- RELATED OPTIONS:
  P101E-P116E Programming Radio Devices

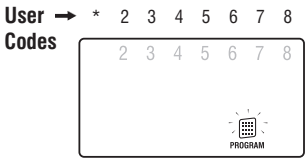


100–664 RK3
Radio Key

100–001 RKP
Radio Keypad

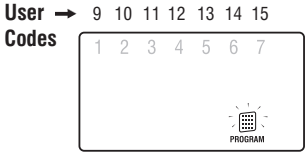
100–067 RK4
Radio Key

ASSIGN RADIO CODES



P09E User Codes 1-8

*Note: User Code 1 is always a keypad code.



P10E User Codes 9-15

RADIO CODES

Each of the 15 User Codes, except for the Master Code, can be programmed to be Radio Codes. This allows up to 14 Ness Radio Keys to be used for Arming and Disarming of the panel. The Ness RKP Radio Keypad can also be used with the D16, (see the RKP installer manual). The optional 100–200 Ness Radio Interface is required for radio operation.

PROGRAMMING RADIO KEYS

Radio Keys can be assigned to take the place of User Codes 2 to 15. (User Code 1 is always a Keypad code.)

PROGRAMMING SEQUENCE:

❶ **At option P09E, select which User Codes 2-8 will be Radio Codes**
At option P10E, select which User Codes 9-15 will be Radio Codes

❷ **Use P12E to P25E to select a User Code**
The User Code selected must already be assigned as a Radio Code by options P09E or P10E

❸ **Press 1E**
The READY light will turn ON to indicate that the User Code is ready to accept the Radio Key.
If a code is already programmed the READY light will not turn on and a warning beep will sound. To clear the code, press 0E, then go back to step 3. (0E clears any Keypad Codes and Radio Keys).

❹ **Press the OFF button on the Radio Key to be programmed**
If the Radio Key is accepted, the READY light will turn off and 3 beeps will sound.
If the READY light stays on and a warning beep sounds, the Radio Key is already assigned to another User Code and must be cleared from that User Code first.

EXAMPLE: To program a Radio Key at User Code 9:
P10E 1E P19E 1E then Press the OFF button on the Radio Key

DELETING A RADIO CODE:

❶ **Use P12E to P25E to select the User Code**
❷ **Press 0E to clear the code** 3 beeps will sound

CODE TABLE

CODE	OPTION No	DESCRIPTION	FACTORY DEFAULT	ENABLE AS A RADIO CODE
User Code 1	P11E	Master Code	123	(Keypad Code only)
User Code 2	P12E			2E
User Code 3	P13E			3E
User Code 4	P14E			4E
User Code 5	P15E			5E
User Code 6	P16E			6E
User Code 7	P17E			7E
User Code 8	P18E			8E
User Code 9	P19E			1E
User Code 10	P20E			2E
User Code 11	P21E			3E
User Code 12	P22E			4E
User Code 13	P23E			5E
User Code 14	P24E			6E
User Code 15	P25E			7E
Installer Code	P99E	Installer Code	000000	

P09E

P10E

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P101E - P116E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
No Radio Devices

NOTES:
- Radio Device programming is done by 'learning' the code by radio.
- Radio Devices codes can only be deleted by keypad.
- Some Ness Radio Devices send separate Alarm and Restore signals.
- Ness Radio Keys (100-664), can be programmed to operate on radio zones, but they are normally used to operate Radio Codes as described on page 56.
- Late model Ness Radio PIRs (100-663) and Radio Reed Switches (100-662) send Supervision signals.

  SUPERVISION RELATED OPTIONS:
  P65E Supervised Radio Zones
  P66E 1E-8E Radio Supervision Alerts
  P67E Radio Supervision Time
  P75E 12E Radio Supervision Fail Report

- RELATED OPTIONS:
  P09E-P10E Programming Radio Keys

RADIO DEVICES - OPTION TABLE

ZONE	OPTION No
Zone 1	P101E
Zone 2	P102E
Zone 3	P103E
Zone 4	P104E
Zone 5	P105E
Zone 6	P106E
Zone 7	P107E
Zone 8	P108E
Zone 9	P109E
Zone 10	P110E
Zone 11	P111E
Zone 12	P112E
Zone 13	P113E
Zone 14	P114E
Zone 15	P115E
Zone 16	P116E

RADIO DEVICE PROGRAMMING

Each of the 16 zones of the D16 can be a radio zone. Once programmed, zones can accept both Radio Devices and normal zone inputs simultaneously.

The optional 100-200 Ness Radio Interface is required for Radio Devices to operate. A Radio Device is any type of Ness transmitter.

PROGRAMMING RADIO DEVICES

Up to 16 Radio Devices can be assigned, (one per zone).

PROGRAMMING SEQUENCE - NO RESTORALS
Suitable for 100-663 **Radio PIR**, 100-665 **Radio Pendant**, 100-203 **Radio Smoke Detector**.

❶ **Select a zone using P101E - P116E**
The ARMED light will be ON if a Radio Device is already programmed to the zone. Press 0E to delete.

❷ **Press 1E**
The READY light will turn ON to indicate that the zone is ready to accept the Radio Device.

❸ **Trigger the Radio Device**
A. If the Radio Device is accepted, the READY light will turn off, the ARMED light will turn on and 3 beeps will sound.
B. If the READY light stays on and a warning beep sounds, the Radio Device is already assigned to another zone and must be cleared from that zone first.
C. If SUPERVISED SIGNALS have also been successfully recognised, the TAMPER light will turn ON.

EXAMPLE: To program a Radio PIR on zone 16:
P116E 1E Trigger the Radio PIR (or simply connect the battery)

PROGRAMMING SEQUENCE - WITH RESTORALS
Suitable for 100-662 **Radio Reed Switch.**

❶ **Alarm the reed switch, ie., move the magnet away from the switch**
Leave the reed switch in the alarm condition and wait until radio transmission has stopped.

❷ **Select a zone using P101E - P116E**
The ARMED light will be ON if a Radio Device is already programmed to the zone. Press 0E to delete.

❸ **Press 1E**
The READY light will turn ON to indicate that the zone is ready to accept the Radio Device.

❹ **Restore the reed switch (place the magnet next to the switch)**
A. If the Radio Device is accepted, the READY light will turn off, the ARMED light will turn on and 3 beeps will sound.
B. The MEMORY light will turn on to indicate that this device sends Restorals.
C. If the READY light stays on and a warning beep sounds, the Radio Device is already assigned to another zone and must be cleared from that zone first.
D. If SUPERVISED SIGNALS have also been successfully recognised, the TAMPER light will turn ON.

EXAMPLE: To program a Radio Reed Switch with Restorals on zone 15:
Alarm the reed switch **P115E 1E** Restore the reed switch

DELETING A RADIO DEVICE:

❶ **Use P101E to P116E to select the zone**
❷ **Press 0E to clear the device** (3 beeps will sound)

TIP: To prevent conflicting radio signals when programming Radio Devices, disable each device once you have finished programming it. (Remove the battery or open the RADIO link).
Remember to enable all the devices when programming is completed.

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RADIO QUICK START

PROGRAMMING RADIO KEYS:

❶ **Select which User Codes 2-8 will be Radio Codes (P09E-P10E)**

❷ **Select the User Code (P12E-P25E)**

❸ **Press 1E**

The READY light will turn ON to indicate that the User Code is ready to accept the Radio Key

❹ **Press the OFF button on the Radio Key to be programmed**

If the Radio Key is accepted, the READY light will turn off and 3 beeps will sound

PROGRAMMING RADIO DEVICES (Radio PIRs etc):

❶ **Select a zone to which the Radio PIR will be assigned (P101E-P116E)**

❷ **Press 1E**

The READY light will turn ON to indicate that the zone is ready to accept the Radio Device.

❸ **Trigger the Radio Device**

If the Radio Device is accepted, the READY light will turn off, the ARMED light will turn on and 3 beeps will sound.

NESS RADIO INTERFACE

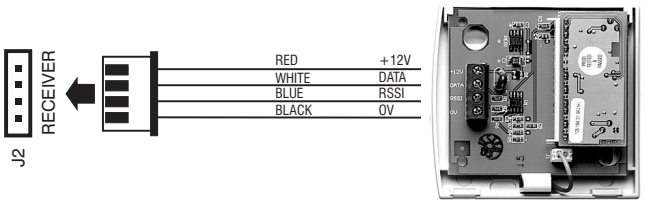
NOTES:
- The Ness Radio Interface is normally installed inside the control panel box.
- In cases where radio reception needs to be improved, the Radio Interface can be installed up to 50 metres away from the control panel. (Use 14/0.20 cable)
- If the Radio Interface must be installed inside a metal enclosure, the antenna wire should protrude outside the enclosure.
- For best performance, the antenna wire should be kept straight and not coiled, shortened or extended.

The Ness Radio Interface (100-200) is the optional radio receiver required to enable all radio functions. Connection to the control panel is via a 4 wire loom and plug supplied with the Ness Radio Interface.

If the Ness Radio Interface is correctly installed, the D16 keypad will flash the RADIO light ON when any radio signal is detected (from both programmed and non-programmed radio devices).

NESS D16 CONTROL PANEL

NESS RADIO INTERFACE
Part No. 100-200



SIGNAL STRENGTH

NOTES:
- Signal strength of Radio Keys can be tested in USER PROGRAM Mode or INSTALLER PROGRAM Mode.
- Signal strength of all other Radio Devices is tested in INSTALLER PROGRAM Mode.
- PRESS **3E** to test the signal strength of the selected transmitter ONLY. (Other devices will be ignored).
- PRESS **4E** to test the signal strength of ANY Ness transmitter (including unprogrammed devices).

The Signal Strength test can be used to test the radio signal from any Ness radio device. The strength of the radio signal received is displayed on the zone lights 1~8 and beeped by the keypad.

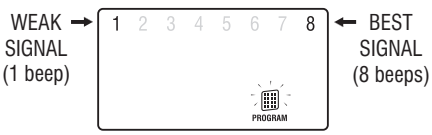
The higher the number displayed (and beeped) the stronger the signal received.

TEST SEQUENCE:

❶ **Enter the option for the radio device to be tested**
For Radio Keys: options P12E~P25E. For all other radio devices: options P101E~P116E

❷ **Press 3E**

❸ **Trigger the radio device**
- One of zone lights 1~8 will turn ON to indicate the signal strength from the transmitter
- The Signal Strength display remains on until another command is entered
- To clear the display and re-test the transmitter, simply press 3E again (or 4E to test any other transmitter)



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NESS RADIO DEVICES
Signal types transmitted

SIGNAL TYPE	RK1 RADIO KEY PENDANT 100-665	RK3 RADIO KEY 3 BUTTON 100-664	RK4 RADIO KEY 4 BUTTON 100-067	R15 RADIO PIR 100-663	RR1 RADIO REED SWITCH 100-662	RSM RADIO SMOKE DETECTOR 100-203
ALARM		ON button	ON button	yes	yes	yes
RESTORAL		OFF button	OFF button	yes	yes	yes
PANIC	PANIC button	PANIC button	PANIC button			
LOW BATT	yes	yes	yes	yes	yes	yes
TAMPER					yes	
SUPERVISION			yes	yes	yes	

RADIO DEVICES - OPERATION

ALARM: Any Ness Radio Device can operates on any zone 1-16 as programmed by P101E~P116E. The hardwired zones 1-16 continue to operate in parallel. (Radio Keys can operate on radio zones 1~16 for special purposes, but are normally programmed to operate as Radio Codes. See page 56).

KEYSWITCH INPUT: A Radio Device programmed to Zone 8 will still work as an alarm even if the Zone 8 input operation has been changed to Keyswitch operation. The P60E 2E and 3E options only affect the Zone 8 terminal inputs.

VIBRATION: Radio device zone signals IGNORE the P30E-P38E vibration sensor settings.

TAMPER REPORT: Radio Device Tamper operation depends on the Armed State of the control panel.

RADIO TAMPER: causes the keypad to continuously beep and also to flash the RADIO, TAMPER and the ZONE (identifying the detector) lights. Pressing any key on the keypad or sending a TAMPER RESTORE will clear this warning.

LOW BATTERY REPORT: A low battery gives 10 beeps and flashes the RADIO & the BATTERY light. The ZONE light identifying the radio device is also ON. The flashing lights stop when any key on the keypad is pressed or a detector code with no low battery is received. Low Battery generates HISTORY and DIALLER reports ONCE only (until the low battery is fixed and a restore report is received).

SUPERVISION: If a zone has the P65E option ON and a radio code has been programmed for that zone, then the supervision is active. This means that the radio detector does not need to have its SUPER enabled (via header link) for the SUPERVISED timeout to occur. (Useful as an inactivity alarm). A zone supervision failure always flashes the identifying ZONE light and the RADIO light.

RADIO SUPERVISION

The purpose of Radio Supervision is to verify the correct operation of Ness Radio PIRs. The Supervision signal from the Radio PIR tells the panel that the device has not been removed from radio range and is in working order.

Non-SUPERVISION Radio PIRs can also be programmed and used with the D16 SUPERVISION TIMERS.

A non-SUPERVISION enabled Radio PIR will transmit signals to the D16 only when it has detected an event. Obviously, there is no guaranteed signal period.

In either case, when the allowed time limit is exceeded then a WARNING is first given (if programmed by P66E 3E), and then after 1 minute, the programmed RADIO SUPERVISION ALERTS are generated by the D16.

NOTE: Manually Excluding a Supervised Zone will also disable Radio Supervision for that zone.

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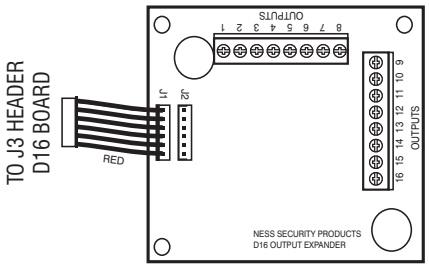
D16 OUTPUT EXPANDER

D16 OUTPUT EXPANDER (Optional)
(100-699)



OPTION No	DESCRIPTION	1E Enable Output Expander	2E Alternate format	3E Day zone follower	4E Output exclude	5E	6E	7E	8E
P117E	Output Expander options					.	.	.	.

ON = Factory default setting.

P117E 1E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Output Expander

NOTES:
- Up to 2 Output Expander boards can be used per D16 panel.

ENABLE OUTPUT EXPANDER

Selecting this option enables the D16 Output Expander. When the Output Expander is enabled, the outputs normally found on the panel's J3 header will be on the Output Expander/s. See the Alternate Format Table.

PROGRAMMING SEQUENCE:

P117E 1E *toggles the option ON and OFF*

P117E 1E OFF: No Output Expander
P117E 1E ON: Output Expander enabled

P117E 2E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Alternate Format

NOTES:
- The 2nd Expander plugs into the 6-way header on the 1st Expander. This 6-way header on the Expander cannot be used for any other purpose.
- IF ALL 16 ZONES and the AUX outputs are required then 2 Expanders are needed - in which case select this option so that it best suits the installation wiring.

ALTERNATE EXPANDER FORMAT

Selecting this option changes the alarms on the 1st and 2nd Output Expander.

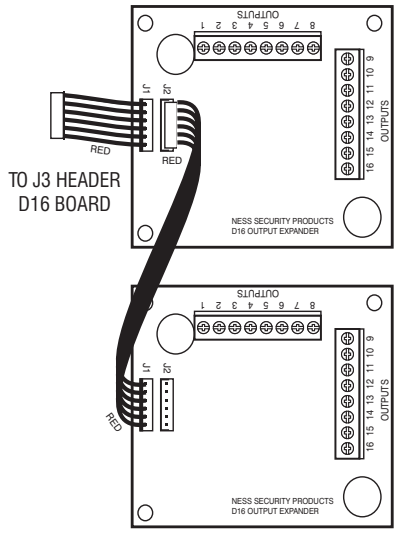
With the option OFF: Zone 1 to Zone 16 are on the 1st Expander. The AUX, ARM and other outputs are on the 2nd Expander. Use this option when only Zone outputs are required and only one Expander is used.

With the option ON: Zones 1 to Zone 8 are on the 1st Expander. The AUX, ARM and other outputs are on the 1ST Expander. Zones 9 to Zone 16 are on the 2nd Expander. Use this option when a variety of outputs are needed using only one Expander.

PROGRAMMING SEQUENCE:

P117E 2E *toggles the option ON and OFF*

P117E 2E OFF: No Alternate Format
P117E 2E ON: Alternate Format enabled



Connecting Two Output Expanders

P117E 2E = OFF		
OUTPUT	EXPANDER 1	EXPANDER 2
1	Zone 1	User Code 9
2	Zone 2	User Code 10
3	Zone 3	User Code 11
4	Zone 4	User Code 12
5	Zone 5	User Code 13
6	Zone 6	User Code 14
7	Zone 7	User Code 15
8	Zone 8	Tel. Line Fail
9	Zone 9	Arm Area 1
10	Zone 10	Arm Area 2
11	Zone 11	Aux 1
12	Zone 12	Aux 2
13	Zone 13	Arm Monitor
14	Zone 14	Mains Fail
15	Zone 15	Battery Fail
16	Zone 16	Ext. Tamper

P117E 2E = ON		
OUTPUT	EXPANDER 1	EXPANDER 2
1	Zone 1	User Code 9
2	Zone 2	User Code 10
3	Zone 3	User Code 11
4	Zone 4	User Code 12
5	Zone 5	User Code 13
6	Zone 6	User Code 14
7	Zone 7	User Code 15
8	Zone 8	Tel. Line Fail
9	Arm Area 1	Zone 9
10	Arm Area 2	Zone 10
11	Aux 1	Zone 11
12	Aux 2	Zone 12
13	Arm Monitor	Zone 13
14	Mains Fail	Zone 14
15	Battery Fail	Zone 15
16	Ext. Tamper	Zone 16

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P117E 3E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Day Zone Follower

NOTES:
- Day zone outputs are turned off when the D16 is in Monitor or Area modes.

DAY ZONE FOLLOWER

This option allows Day zones to appear on the Zone Outputs.

In Day mode the Zone Output will follow the state of any active Day zone. This occurs independently of the Program Zone selections P118E (Output Expander Zone Follower) and P119E (Output Expander Zone Latch).

PROGRAMMING SEQUENCE:

P117E 3E *toggles the option ON and OFF*

P117E 3E OFF: No Day Zone Follower
P117E 3E ON: Day Zone Follower enabled

P117E 4E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Output Exclude

NOTES:

OUTPUT EXCLUDE

This allows zones selected for Manual Exclusion (not Auto Exclusion) to also Exclude the Expander Zone outputs. With this option ON, and if a zone has been manually excluded then it will not signal an alarm on the Expander.

PROGRAMMING SEQUENCE:

P117E 4E *toggles the option ON and OFF*

P117E 4E OFF: No Output Exclude
P117E 4E ON: Output Exclude enabled

		Zones															
OPTION No	DESCRIPTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P118E	O/P Expander zones																
P119E	O/P Expander alarm zones																

ON = Factory default setting

P118E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Output Expander zones

NOTES:
- Selecting a zone in both P118 & P119 options effectively gives pulsed outputs whenever that zone alarms.

OUTPUT EXPANDER ZONE FOLLOWER

This selects the zones that will be output whenever the zone is unsealed. When the zone reseals the output automatically goes off.

Additionally if a zone is also selected in P119 (to zone latch) then an output will only occur whenever a zone is in alarm and is also unsealed. In this case when the zone reseals the output automatically goes off again. A further zone unseal will turn the zone Expander output On again.

PROGRAMMING SEQUENCE:

P118E 1E-16E *toggles the option ON and OFF*

P118E 1E-16E OFF: Output Expander disabled for that zone
P118E 1E-16E ON: Output Expander enabled for that zone

P119E

PROGRAM MODE LEVEL:
Installer, Remote by PC

FACTORY DEFAULT:
OFF: No Output Expander zone latch

NOTES:

OUTPUT EXPANDER ZONE LATCH

This selects the zones that will be output whenever the zone is latched into alarm. The output goes off only when the alarm system is reset.

Additionally if a zone is also selected in P118 (to zone follow) then an output will only occur whenever a zone is in alarm and is also unsealed. (See P118 above).

PROGRAMMING SEQUENCE:

P119E 1E-16E *toggles the option ON and OFF*

P119E 1E-16E OFF: Output Expander zone alarm disabled for that zone
P119E 1E-16E ON: Output Expander zone alarm enabled for that zone

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AUDIBLE MONITORING OPERATION

The D16 can send audible alarm reports to any DTMF capable telephone. The types of alarms sent are listed in the Reporting Format Table.

The basic audible message takes the form of:
N [pause] **A** [pause] **B** [pause]

N = The first digit of the Account Number, P72E. (**N** can be the digits 1-9. If P72E starts with 0, **N** is not sent).
A = First digit of the Alarm identifier (See Reporting Format Table).
B = Second digit of the Alarm identifier (See Reporting Format Table).

MESSAGE EXAMPLE (AUDIBLE PULSE FORMAT P86E 4E)
If the Account Number is 1234 and zone 14 alarm is reported:

beep [pause] **beep** [pause] **beep beep beep beep**

REPORTING SEQUENCE
When triggered by an alarm event the D16 will call the Primary Telephone Number (or the Follow Me Telephone Number, if programmed) and at the end of the dialling of the last digit, it will wait for 5 seconds and then commence the audible message, the audible message will continue to repeat for 45 seconds or until it is kissed off by a DTMF tone.

If there is more than one alarm message to transmit then after it has received the Kiss-off/ Acknowledge tone it will commence transmission of the next message. The D16 should continue to do this until all alarm messages are transmitted and Kissed-off.

ACKNOWLEDGE TONE
The person receiving the call can then acknowledge the alarm by pressing the [#] key on their telephone. Press the [#] key for 2 seconds during pauses in the audible message. (On mobile phones, press the # key in short bursts. Many mobile phones enter sub menus if the # key is pressed continuously).

If the alarm is not acknowledged, the keypad's LINE light will flash continuously until the panel is next Armed.

ALARM EVENTS SENT
The Reporting Format Table identifies the alarm events which can be programmed to be sent in Audible Format.

Open/Close reports, Restorals and Exclusions (Isolates) are NOT sent in Audible Format, even if selected ON.

AUDIBLE MONITORING
REPORTING FORMAT TABLE

DIGIT A	DIGIT B	ALARM
1	-	Zone 1
2	-	Zone 2
3	-	Zone 3
4	-	Zone 4
5	-	Zone 5
6	-	Zone 6
7	-	Zone 7
8	-	Zone 8
9	-	Zone 9
1	0	Zone 10
1	1	Zone 11
1	2	Zone 12
1	3	Zone 13
1	4	Zone 14
1	5	Zone 15
1	6	Zone 16
2	1	Duress
2	2	Keyswitch Tamper/Panic
2	3	Keypad Panic
2	4	Radio Panic
2	5	Medical alarm
2	6	Fire alarm
2	7	Exit from installer program mode
3	1	External Tamper
3	2	Internal Panel Tamper
3	3	Keypad Tamper
3	4	Radio Tamper
3	5	Mains Fail
3	6	Panel Battery Fail
4	1	RADIO Battery Fail
4	2	RADIO Supervision Fail

AUDIBLE FEEDBACK

♩♩♩ 3 BEEPS:
- The User Code is valid
- Successful Arming or Disarming
- An Auxiliary output has been turned ON.

♩ ⌐¬ 1 LONG BEEP:
- D16 is already Armed
- Invalid code. Try again.

♩ 1 SHORT BEEP:
- An Auxiliary output has been turned OFF.

SUMMARY OF TELEPHONE COMMANDS

[0] Prepare to receive commands
[1] [#] Arm Areas
[2] [#] Disarm Areas
[3] [#] Turn Aux 1 Output ON or OFF
[4] [#] Turn Aux 2 Output ON or OFF
[*] [#] Finished - hang up

OPERATING THE D16 BY TELEPHONE

The D16 will allow a user to call in to the panel, using a standard DTMF telephone, and remotely Arm or Disarm all areas and also turn on or off Aux 1 and Aux 2.

To maintain panel security, remote operations can only be activated after entering a valid user code.

To operate the D16 by telephone, you need a DTMF capable telephone, a valid User Code and you must know the Telephone number of the line to which the D16 is connected.

SEQUENCE OF OPERATION.

1. Phone the D16 telephone number and listen for the required number of rings (ring ring...ring ring) and then hang up.
2. Wait 10 seconds and then call the number again within 50 seconds.
3. The D16 will answer the second call immediately, sound a beep for 2 seconds then, after a pause, it will sound a lower frequency tone. The D16 is now ready to receive telephone commands.
4. Press the [0] button on the telephone. This tells the D16 that telephone commands will follow. The D16 will respond with either 3 beeps if all OK (One long beep means try again).
5. Now enter a valid User Code (that is normally used for Arming or Disarming the D16) followed by the [#] button.

   The D16 will respond with 3 beeps if it recognises the code or 1 long beep to signal the code was invalid and to try again.
6. Enter the required command.
   See: Summary Of Telephone Commands.
7. Press [*] [#] to finish. This tells the D16 to hang up. Also hang up your telephone.

NOTES
- If the D16 does not receive commands for periods longer than 10 seconds it will assume that the call is finished and it will hang up.
- If an alarm occurs which requires the D16 to dial out while attempting remote control, the D16 will treat the alarm as a priority, give a constant tone as a warning and then hang up.
- When all remote control commands are finished press [*] [#] to force the D16 to hang up.

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PROGRAMMING OPTIONS SUMMARY

OPTION		DESCRIPTION	DEFAULT	PAGE
P00E		Follow Me Tel. No.	none	41
P09E		RadioKey Enable Codes 1-8	none	56
P10E		RadioKey Enable Codes 9-15	none	56
P11E		User Code 1 (Master)	123	14
P12E-P25E		User Codes 2-15	none	14
P26E		Entry Delay Time 1	20 sec	15
P27E		Entry Delay Time 2	6=60 sec	15
P28E		Exit Delay Time	60 sec	15
P29E		Siren Reset Time	5 min	15
P30E		Normal Zone Sens	all zones	16
P31E-38E		Vibration Sens. Z1-8	none	16
P39E		DoubleTrigger Zones	none	17
P40E		Instant Zones	Zones 3-16	17
P41E		Entry Delay 1 Zones	Zone 1	17
P42E		Handover Zones	Zone 2	18
P43E		Entry Delay 2 Zones	none	18
P44E		Lockout Zones	All zones	18
P45E		AREA 1 Zones	All zones	20
P46E		AREA 2 Zones	none	20
P47E		AREA1 Codes 1-8	All codes	21
P48E		AREA1 Codes 9-15	All codes	21
P49E		AREA2 Codes 1-8	Code 1	21
P50E		AREA2 Codes 9-15	none	21
P51E		Monitor Mode Zones	none	19
P52E		24hr Zones	none	19
P53E		Day Zones	none	19
P54E		Reset OP Zones	All zones	22
P55E		Strobe Zones	All zones	22
P56E		Sonalert Zones	All zones	22
P57E		Siren Zones	All zones	23
P58E		Aux 1 Zones	none	23
P59E		Aux 2 Zones	none	23
P60E	1E	Entry Beeps	ON	24, 25
	2E	Ksw Monitor/Disarm	OFF	
	3E	Ksw Arm/Disarm	OFF	
	4E	Tamper siren lockout	ON	
	5E	Duress to Reset OP	OFF	
	6E	Auto Exclude Zones	ON	
	7E	Auto KP display off	OFF	
	8E	Delay Arm1,2 outputs	OFF	
P61E	1E	Tamper to Reset OP	ON	26
	2E	Tamper to Strobe OP	ON	
	3E	Tamper to Sonalert	ON	
	4E	Tamper to Siren	ON	
	5E	KP Panic to Reset OP	ON	
	6E	KP Panic to Strobe Op	ON	
	7E	KP Panic to Sonalert	ON	
	8E	KP Panic to Siren	ON	
P62E	1E	S/cut Memory display	ON	27, 28
	2E	S/cut Zone Exclude	ON	
	3E	S/cut Monitor Mode	ON	
	4E	S/cut Keypad Panic	OFF	
	5E	S/cut Area 1 Arm	ON	
	6E	S/cut Area 2 Arm	OFF	
	7E	Auto Exclude 2s Warn	ON	
	8E	Exit Time x 10	OFF	

OPTION		DESCRIPTION	DEFAULT	PAGE
P63E	1E	Monitor to RESET OP	OFF	28
	2E	Monitor to STROBE OP	OFF	
	3E	Monitor to SONALERT	OFF	
	4E	Monitor to SIREN	OFF	
	5E	Day Mode to RESET OP	ON	
	6E	Day Mode to STROBE OP	ON	
	7E	Day Mode to SONALERT	OFF	
	8E	Day Mode to SIREN	OFF	
P64E	1E	Brief Monitor Alarm	OFF	29, 30
	2E	Brief Day Alarm	OFF	
	3E	Monitor Zones Entry Delay2	ON	
	4E	Radio Key Chirp & Flash	OFF	
	5E	50Hz Mains Frequency	ON	
	6E	Double Key Keypad Panic	ON	
	7E	Keypad Fire Alarm	OFF	
	8E	Keypad Medical Alarm	OFF	
P65E		Supervised Radio Zones	none	31
P66E	1E	Supervision RESET output	OFF	32, 33
	2E	Supervision STROBE output	OFF	
	3E	Supervision SONALERT	OFF	
	4E	Supervision SIREN output	OFF	
	5E	Supervision AUX1 output	OFF	
	6E	Supervision AUX2 output	OFF	
	7E	Supervision SpeedUp x 6	OFF	
	8E	Supervision SpeedUp x10	OFF	
P67		Supervision Time	24 hours	31
P68E	1E	**ZONE SPLIT**	OFF	35
	2E	3K3 Zone Resistors	OFF	36, 37
	3E	Radio Panic Toggles AUX1	OFF	
	4E	Radio Panic Pulses AUX1	OFF	
	5E	Radio Arm unseal warning	OFF	
	6E	24hr Zone Fire Siren	OFF	
	7E	RK4 AUX button to AUX1	OFF	
	8E	Quiet chirps on Arm/Disarm	OFF	
P69E	1E	ARM1 Pulse Output	OFF	38, 39
	2E	ARM2 Pulse Output	OFF	
	3E	Quiet Monitor Siren	OFF	
	4E	6 Beeps on Arming	OFF	
	5E	Radio Key Monitor Arm	OFF	
	6E	Disable Mains fail alarm	OFF	
	7E	RK4 AUX button toggles AUX2	OFF	
	8E	RK4 AUX button pulses AUX2	OFF	
P70E		**Telephone No.1 Primary**	none	40
P71E		Telephone No.2 Secondary	none	40
P72E		Account No. 1	0000	40
P73E		Account No. 2	0000	40
P74E		**Report Zone Alarms**	All zones	42, 43
P75E		Report Misc. Alarms		
P76E		Report Zone Restorals	All zones	
P77E		Report Misc. Restorals		
P78E		Report Multiple Zone alarms	none	42
P79E		Account No.2 Zones	none	42
P80E		Tel No. 3 for Test Calls	none	41
P81E		Tel No.4 Callback	none	41
P82E	1E	Restoral immediately	OFF	43
	2E	Restoral after Siren Time	OFF	
	3E	Restoral on Disarm & seal	OFF	
	4E	Restore on Disarm always	ON	

OPTION		DESCRIPTION	DEFAULT	PAGE
P83E		Test Call Interval	84=168hrs	44
P84E		Time before next Test Call	6=12 hours	
P85E	1E	Auto Dialling, Pulse & DTMF	ON	
	2E	Pulse Dialling always	OFF	
	3E	DTMF Dialling always	OFF	
P86E	1E	Disable Dialler	OFF	45, 46
	2E	Contact ID format	ON	
	3E	Audible DTMF format	OFF	
	4E	Audible PULSE Format	OFF	
	5E	Contact ID + Audible DTMF	OFF	
	6E	Contact ID + Audible PULSE	OFF	
P87E	1E	Split Dial Pri/Sec Phone Nos.	OFF	47
	2E	Check for Dial Tone	ON	
	4E	4 Dialling attempts	ON	
P88E	1E	**AREA 1 Open/Close reports**	OFF	48, 49
	2E	AREA 2 Open/Close reports	OFF	
	3E	Siren Chirp on Kiss-off	OFF	
	4E	Flash Strobe on Kiss-off	OFF	
	5E	Forced Opening report	ON	
	6E	Delayed Closing Reports	OFF	
	7E	Manual Exclude Reports	ON	
	8E	Auto Exclude Reports	ON	
P89E	1E	Enable Test Calls	ON	50, 51
	2E	Mains Report Delay	ON	
	3E	Listen-In to Dialler	OFF	
	4E	Swinger shutdown	ON	
	5E	Line Fault Monitor	OFF	
	6E	Line Fault to AUX2	OFF	
	7E	Internal clock timing	OFF	
P90E	1E	Enable Up/Download	OFF	52, 53
	2E	Enable Direct Connect	OFF	
	3E	Enable Remote Arming	OFF	
	4E	Enable Remote Disarming	OFF	
	5E	Enable Remote AUX control	OFF	
	6E	Enable Remote Status report	OFF	
	7E	Enable Remote Event Report	OFF	
	8E	Enable Callback Mode	OFF	
P91E		Required rings to answer	1	54
P94E		"No Memory Warning" zones	none	54
P95E		Clear Radio Devices		55
P96E		Clear Memory		
P97E		**Factory Defaults**		
P98E		Clear User codes		
P99E		Set Installer code	000000	14
P101E - P116E		Radio Device Codes 1-16	none	57
P117E	1E	Enable Output Expander	OFF	60, 61
	2E	Alternate Expander Format	OFF	
	3E	Day Zone Follower	OFF	
	4E	Output Exclude	OFF	
P118E		Output Expander zone Follower	none	
P119E		Output Expander zone Latch	none	

These options are available in USER PROGRAM MODE.

ALL options are available in INSTALLER PROGRAM MODE.

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D•16
DIALLER SECURITY ALARM PANEL

NESS D16 ALARM CONTROL PANEL

INSTALLATION RECORD

Date purchased:	Date installed:
Installation Company:	
Telephone:	

Monitoring Company:	
Telephone:	

P26E ENTRY DELAY TIME 1		Seconds
P27E ENTRY DELAY TIME 2		Seconds
P28E EXIT DELAY TIME		Seconds
P29E SIREN RESET TIME		Minutes

ZONES	DEVICE TYPE PIR, Reed switch, etc	DESCRIPTION Entrance, bedroom1, etc	ZONE ASSIGNMENT **P41E** ENTRY DELAY 1	**P43E** ENTRY DELAY 2	**P42E** HANDOVER	**P40E** INSTANT	**P45E** AREA 1	**P46E** AREA 2	**P51E** MONITOR	**P52E** 24 HOUR	**P54E** RESET OUTPUT	**P55E** STROBE OUTPUT	**P56E** SONALERT OUTPUT	**P57E** SIREN OUTPUT	**P74E** Report (dialler)
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															

CODE	OPTION No	CODE HOLDER	AREA 1	AREA 2	RADIO KEY CODE (Y/N)
User Code 1 Master Code	P11E				(Keypad Code only)
User Code 2	P12E				
User Code 3	P13E				
User Code 4	P14E				
User Code 5	P15E				
User Code 6	P16E				
User Code 7	P17E				
User Code 8	P18E				
User Code 9	P19E				
User Code 10	P20E				
User Code 11	P21E				
User Code 12	P22E				
User Code 13	P23E				
User Code 14	P24E				
User Code 15	P25E				

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